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Jung et al.

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(54) **SCREEN BASE**

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(73) Assignee: **Fursys, Inc.**, Seoul (KR)

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Sep. 21, 2011 (KR) 10-2011-0095477

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A47F 5/00 (2006.01)
E04B 2/74 (2006.01)
A47B 91/02 (2006.01)

(52) **U.S. Cl.**
CPC ***E04B 2/7422*** (2013.01); *A47B 91/02* (2013.01)

(58) **Field of Classification Search**
USPC 248/127, 128, 129, 176.1; 16/19, 45
See application file for complete search history.

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(57) **ABSTRACT**

Disclosed herein is a screen base capable of allowing at least one base to be rotatably coupled to a vertical bar which extends to a lower end of a screen, and of adjusting an installation angle of the base. The screen base, which is coupled to the vertical bar extending to the lower end of the screen and supports the screen, includes a base including a body which has a hollow shape and is rotatably coupled to the vertical bar, and an extension portion which is formed to extend outward of the vertical bar from the body; and a fixing unit to fix the body with respect to the vertical bar.

8 Claims, 19 Drawing Sheets

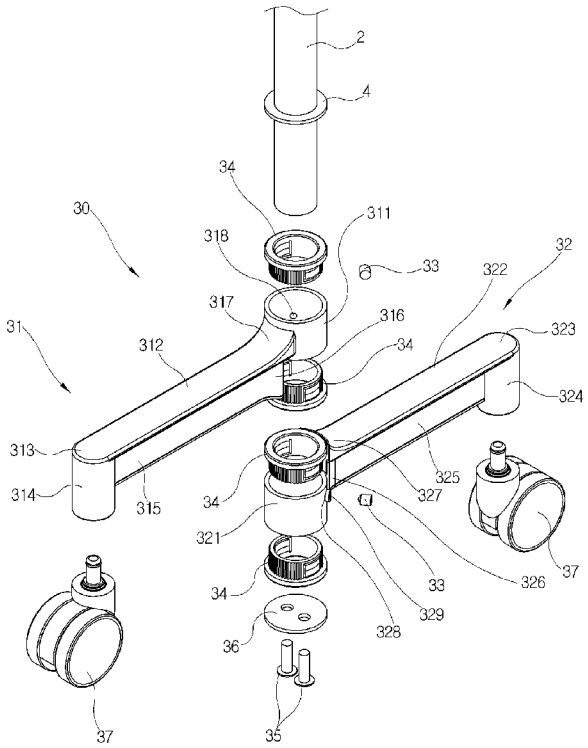


Fig.1

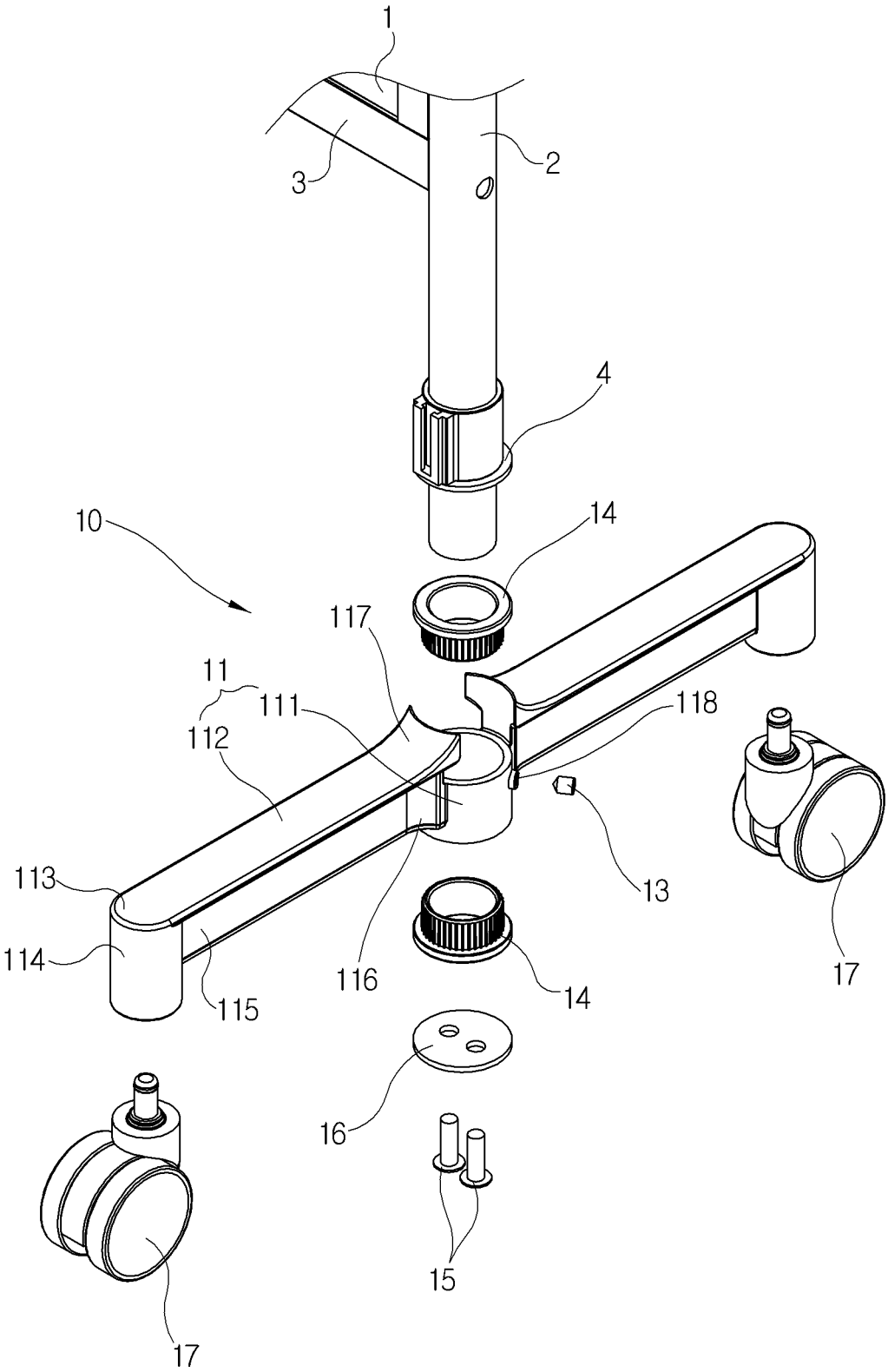
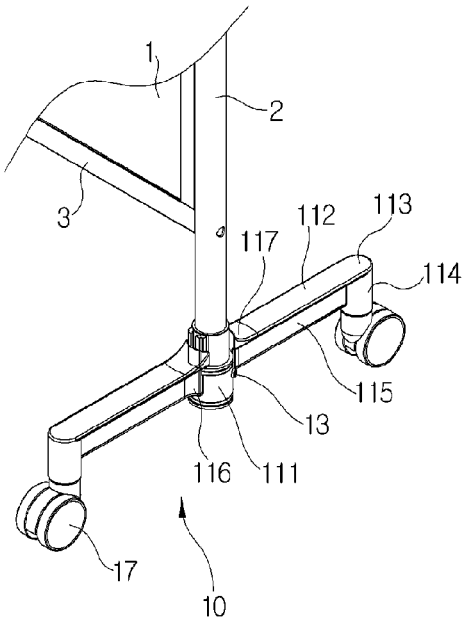


Fig.2



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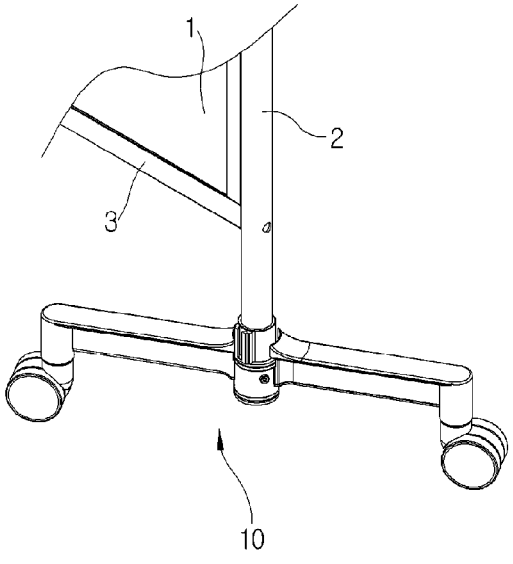

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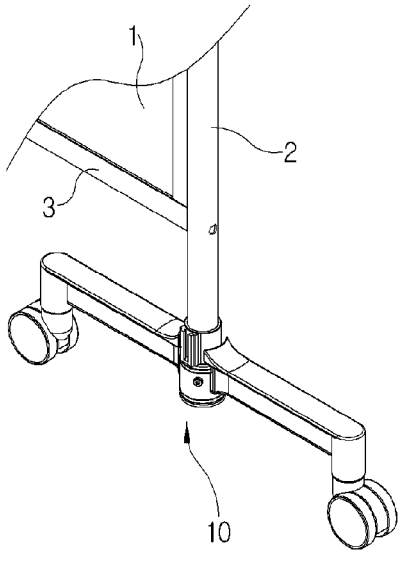


(c)

Fig.3

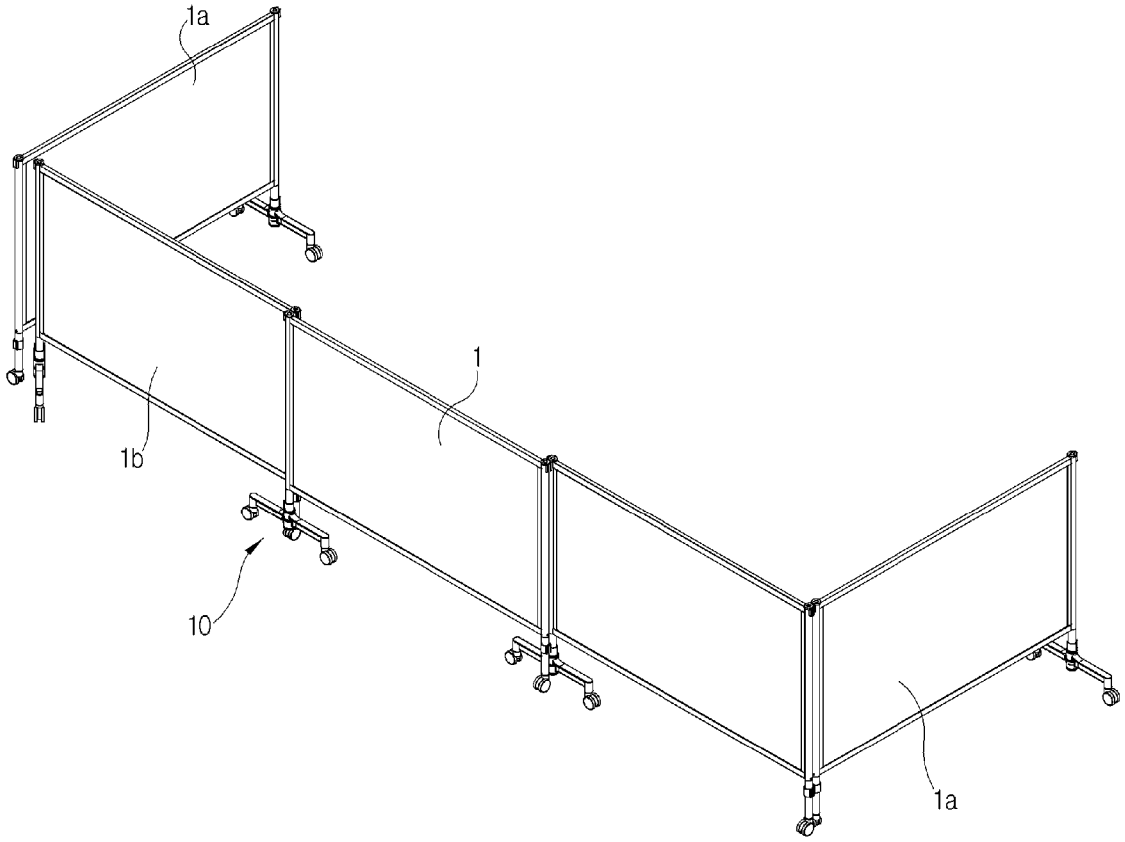
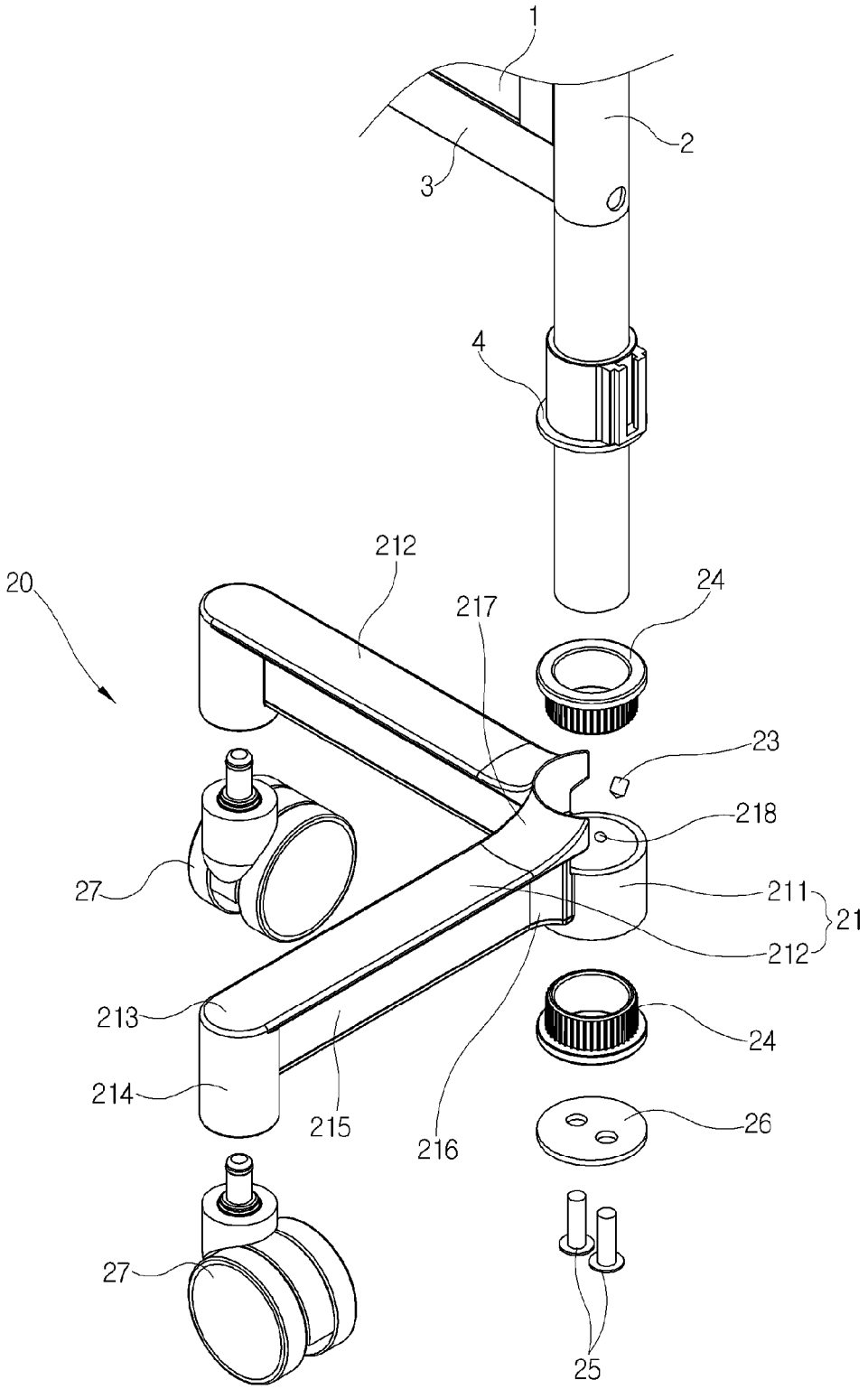


Fig.4



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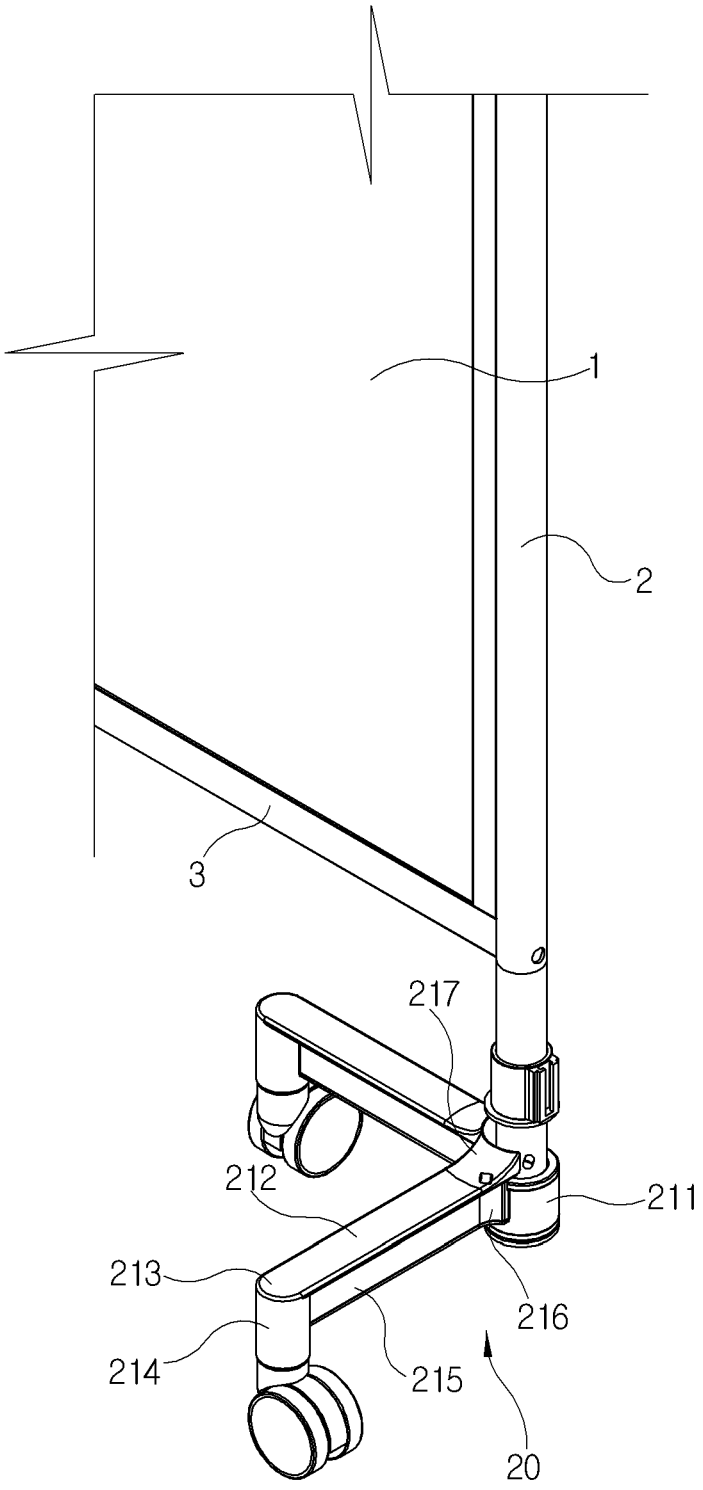
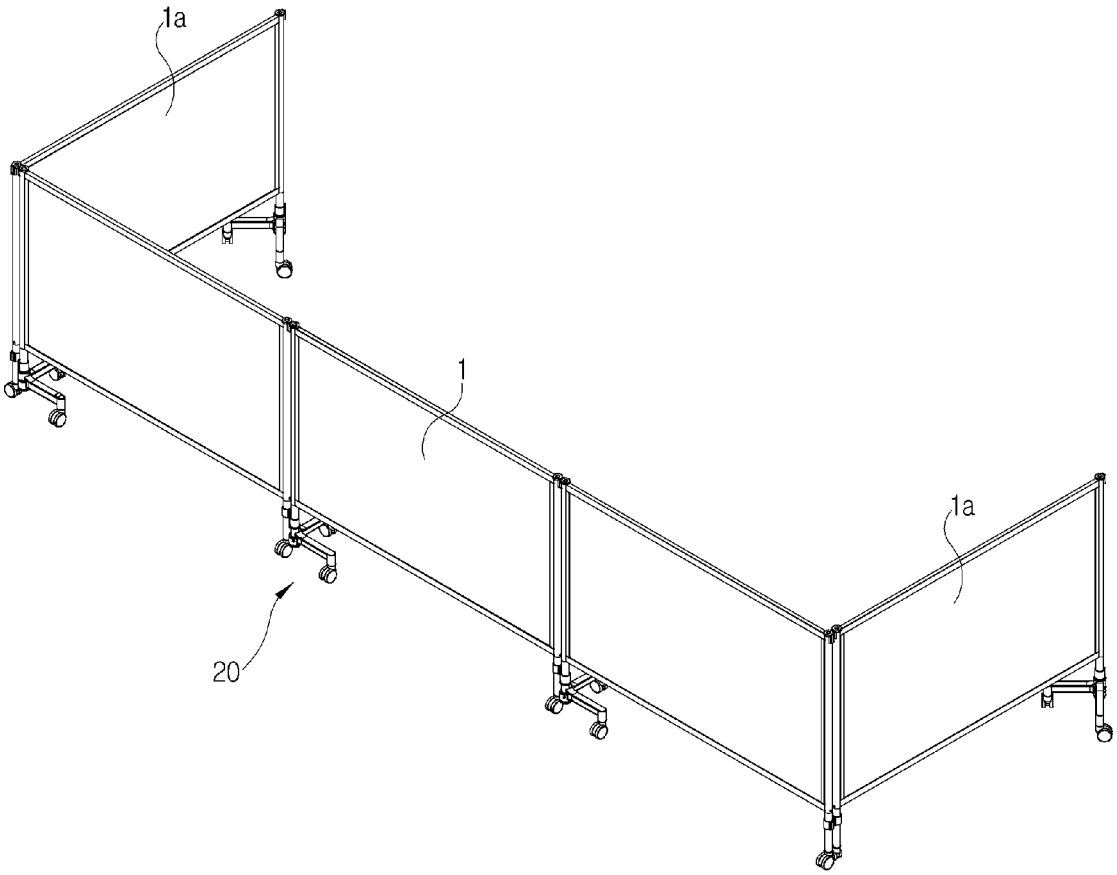


Fig.6



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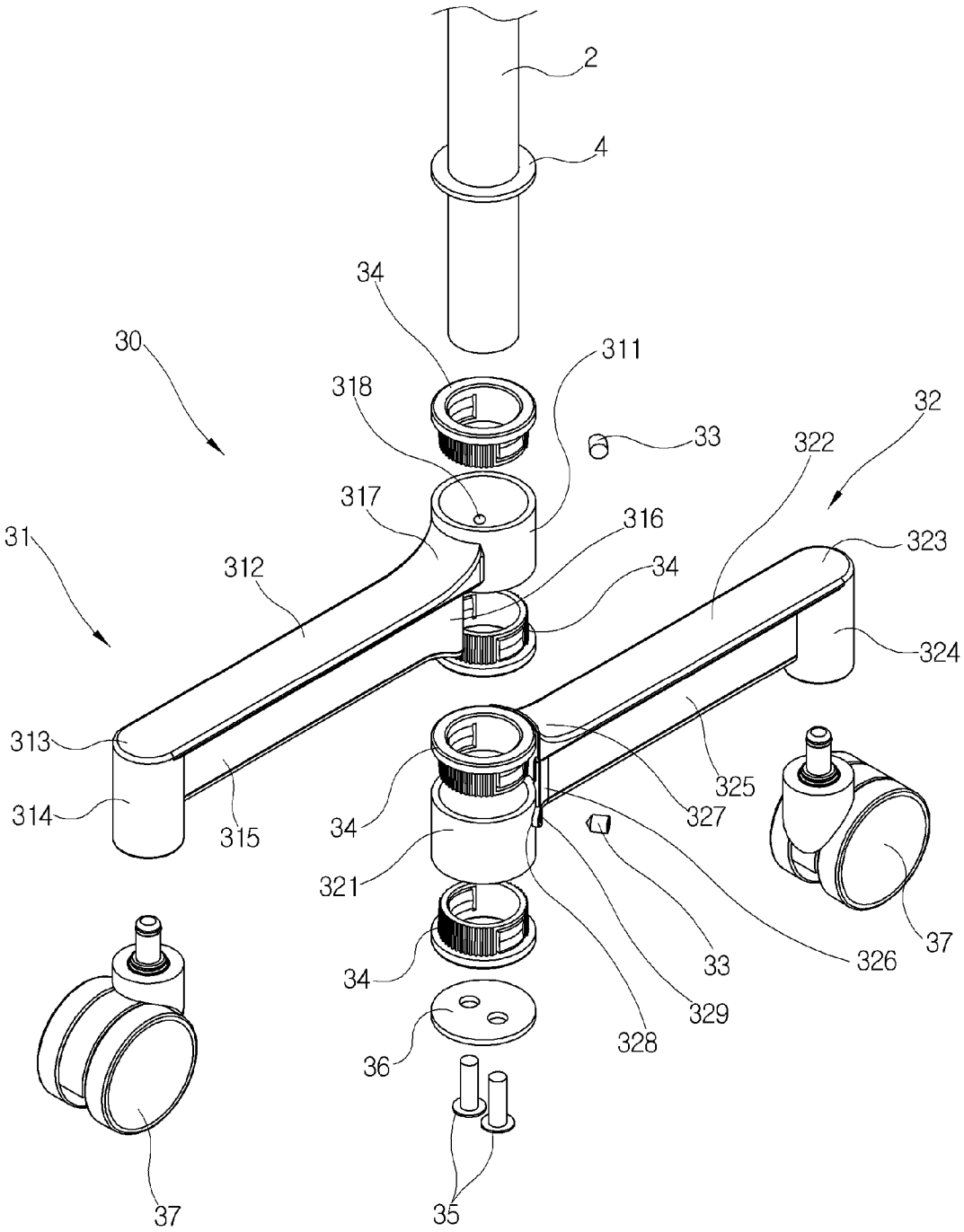
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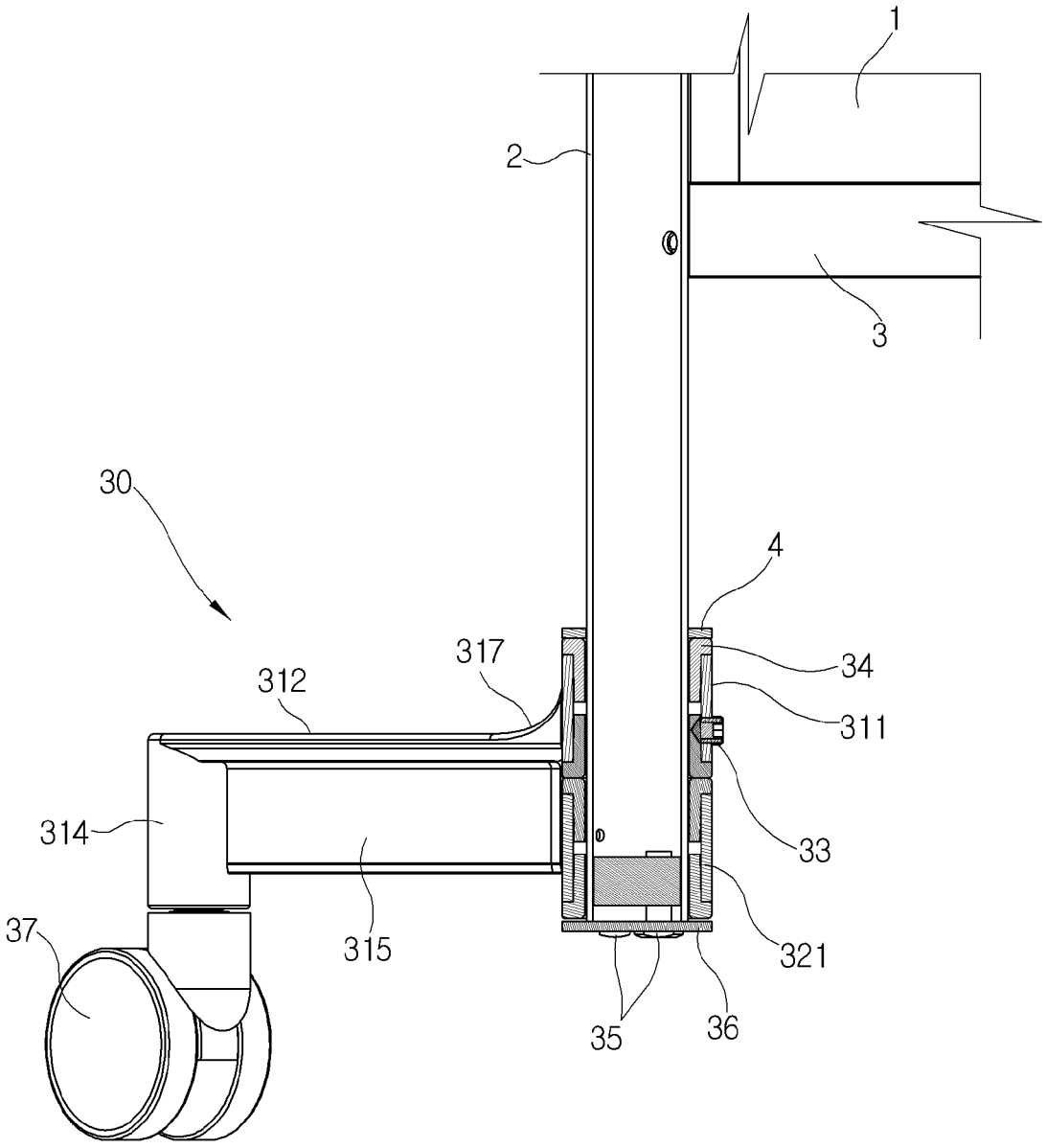
Fig.8



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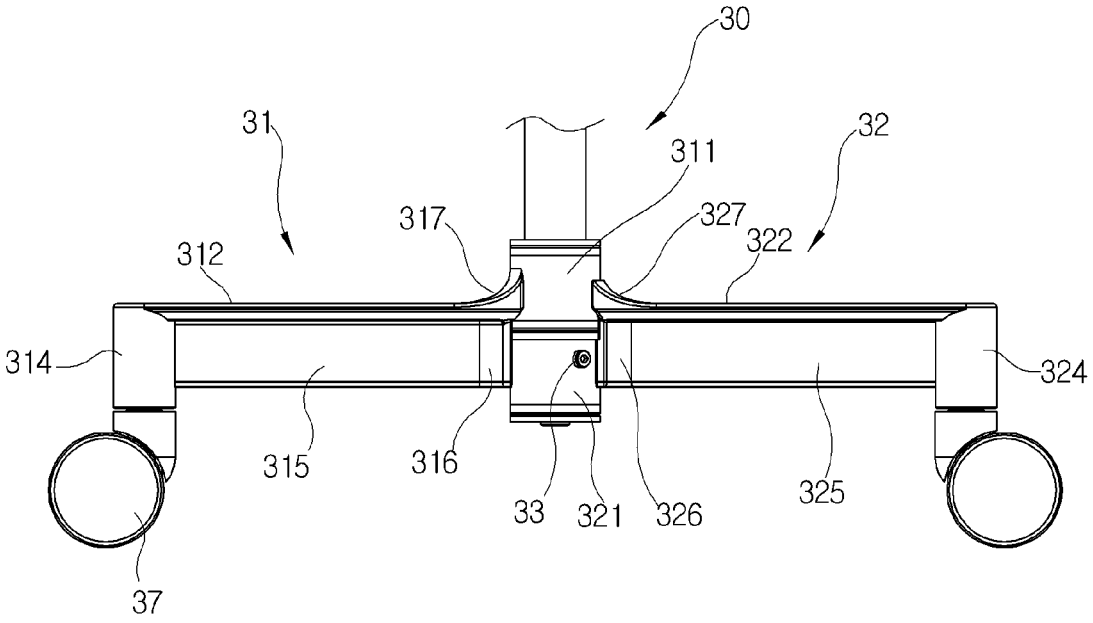
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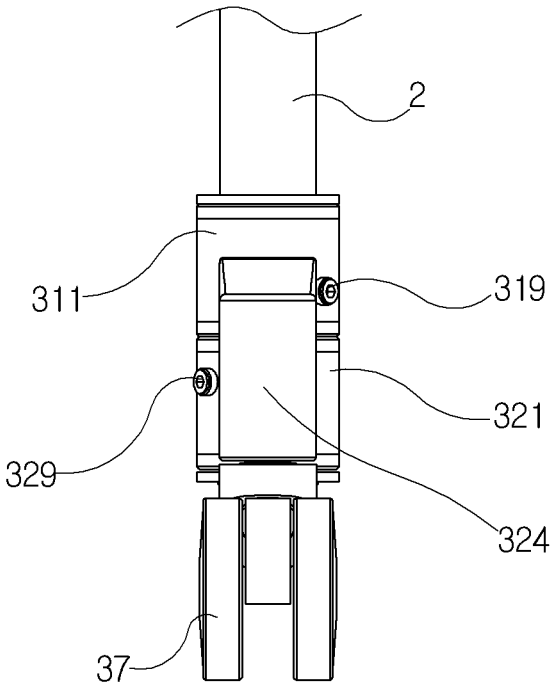
Fig.10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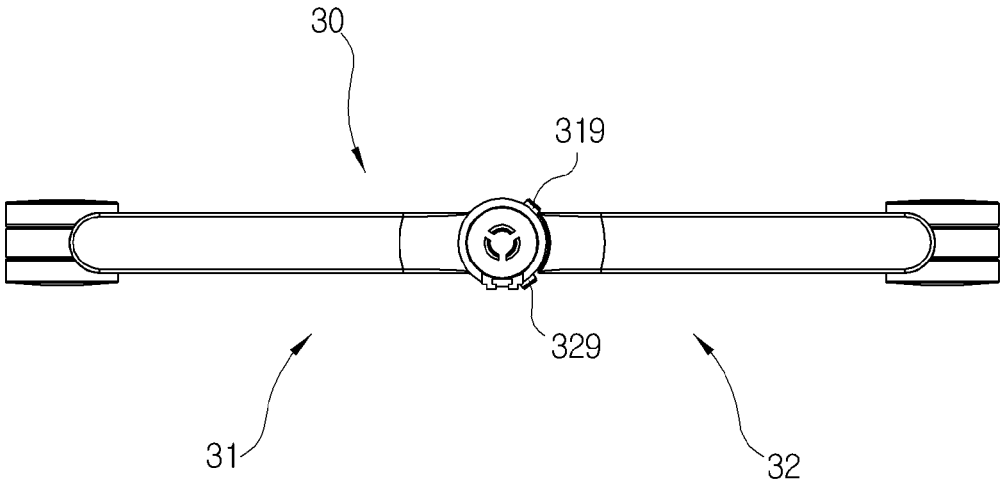

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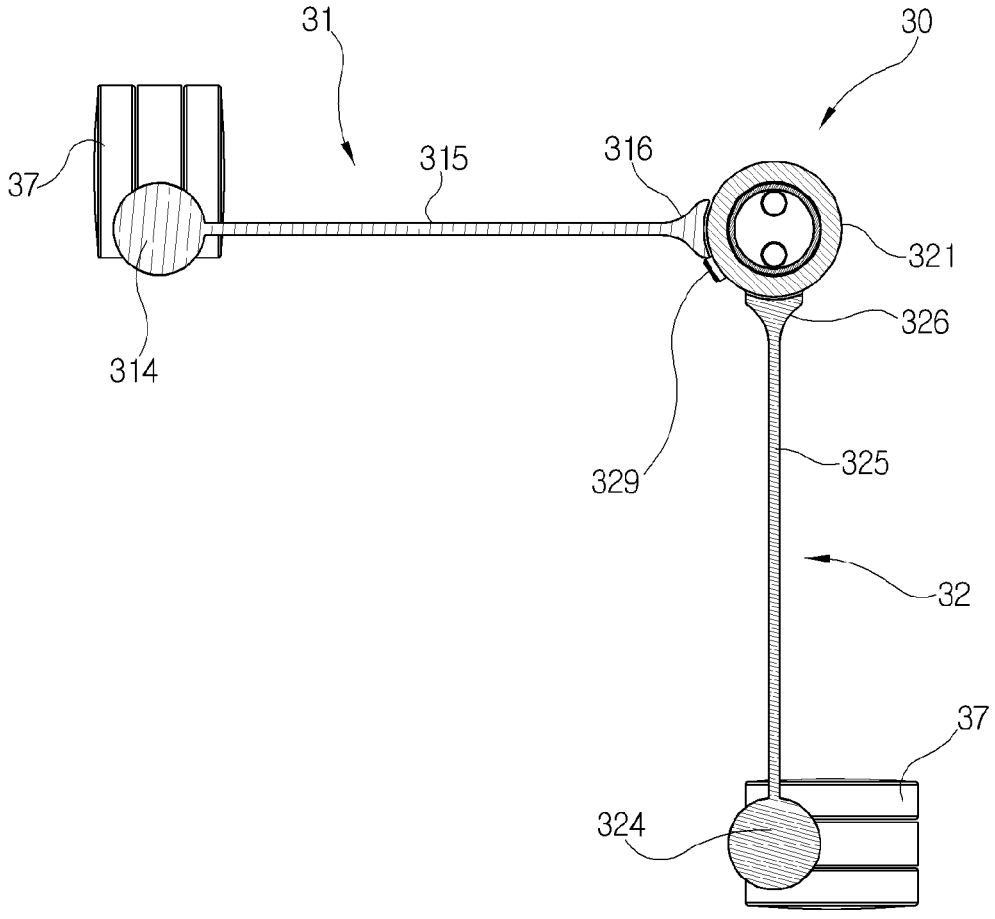

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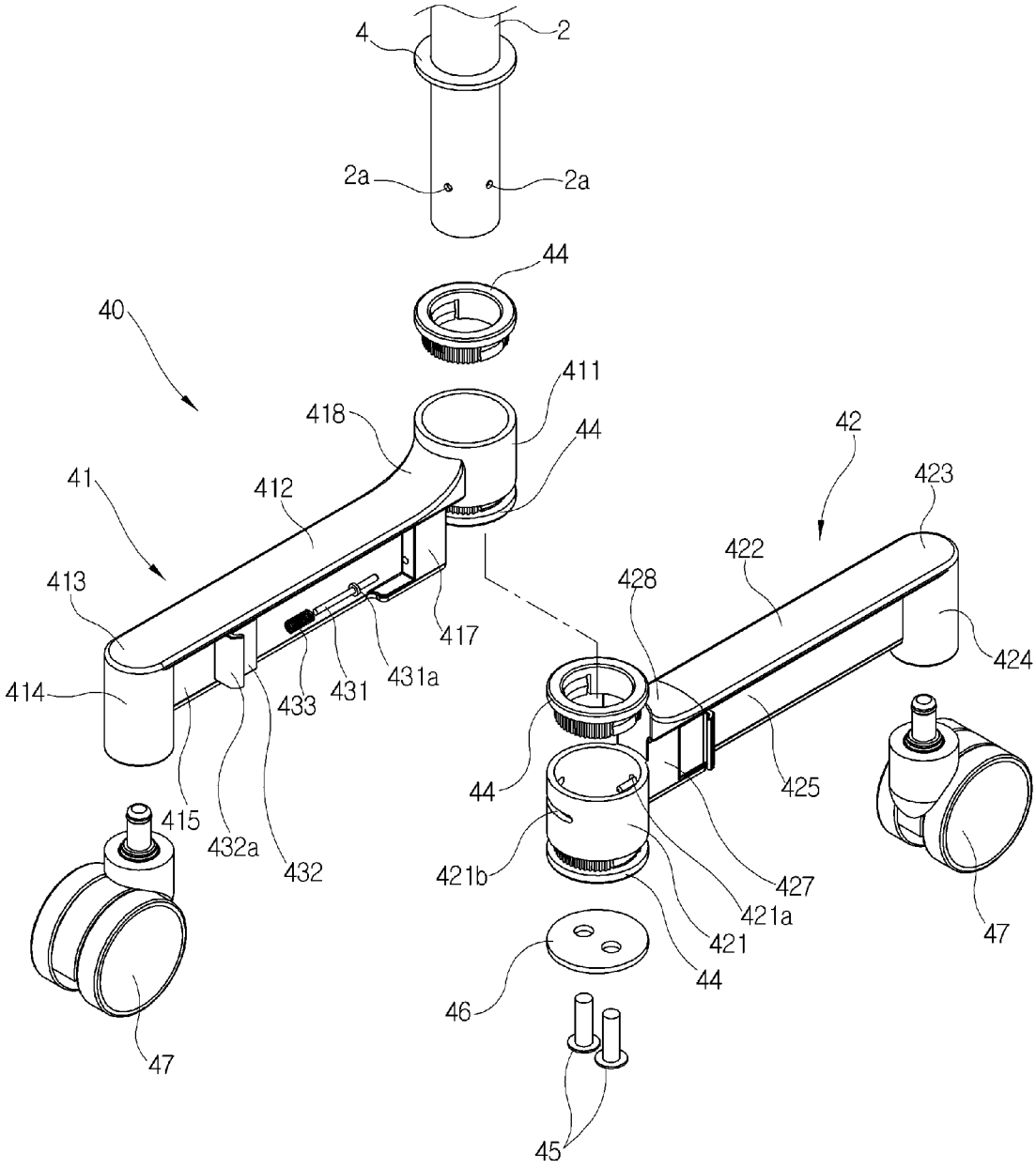
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Fig.14

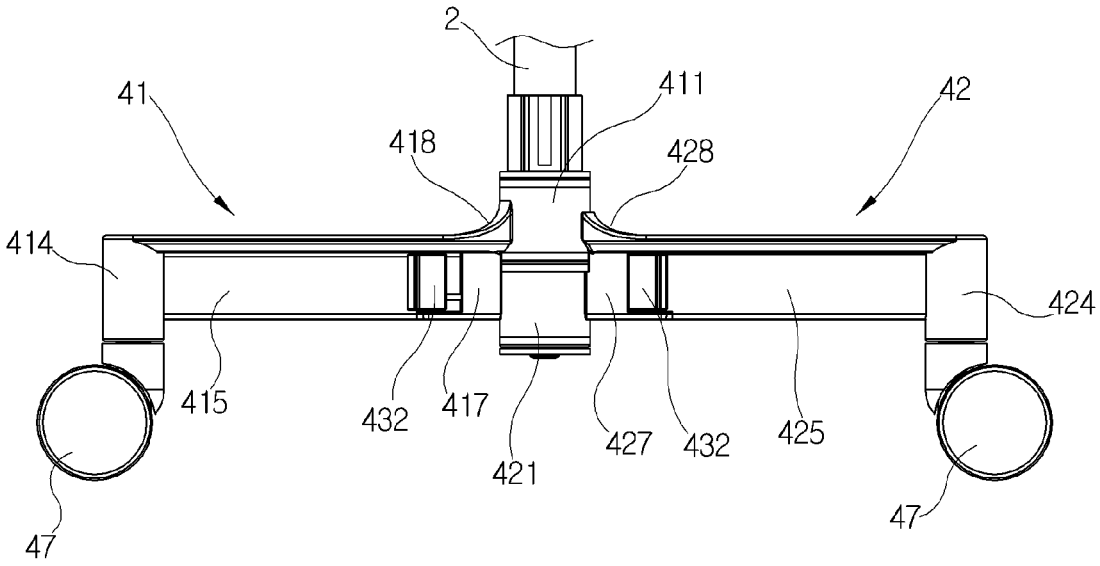

Fig.15

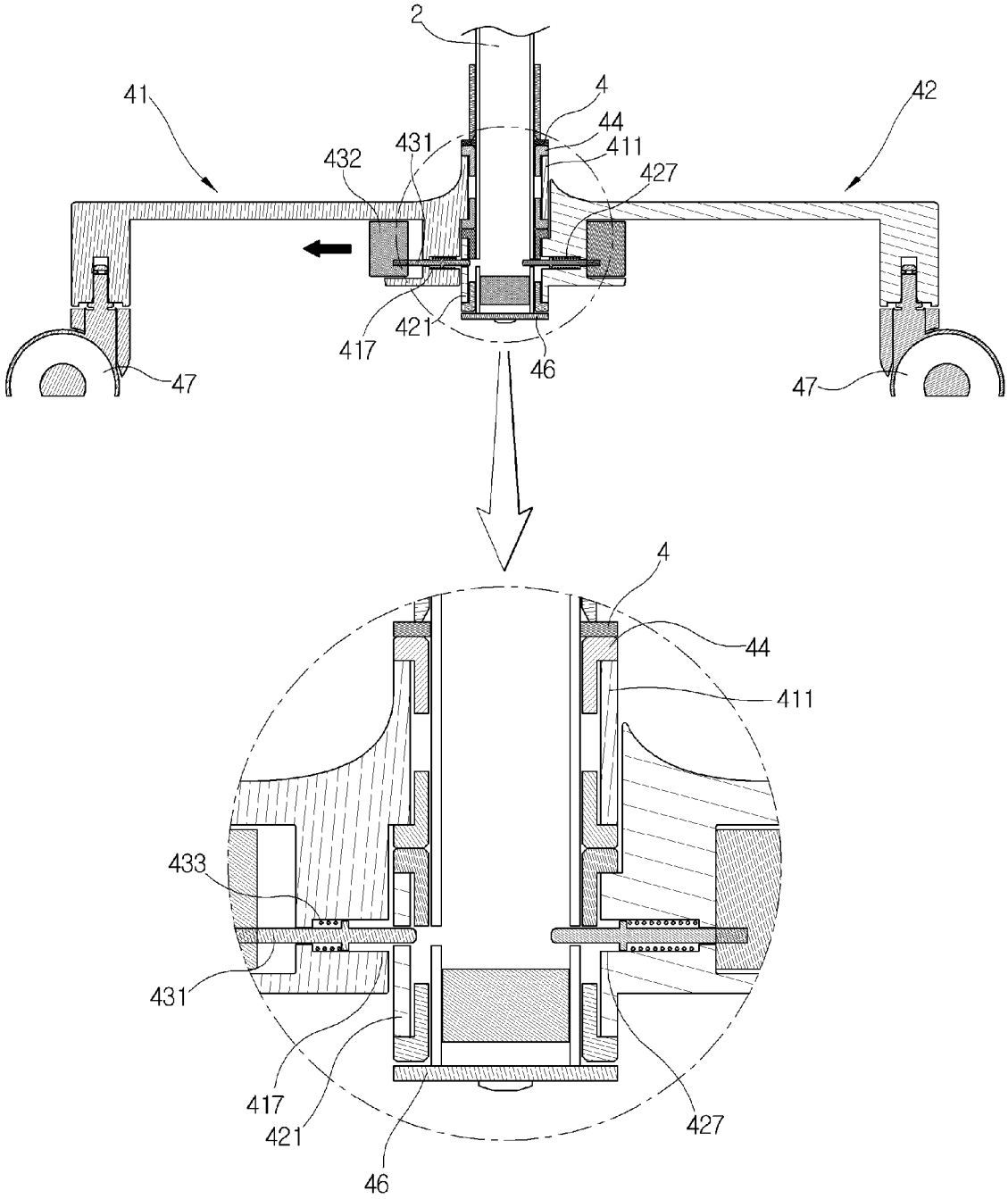
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Fig.16

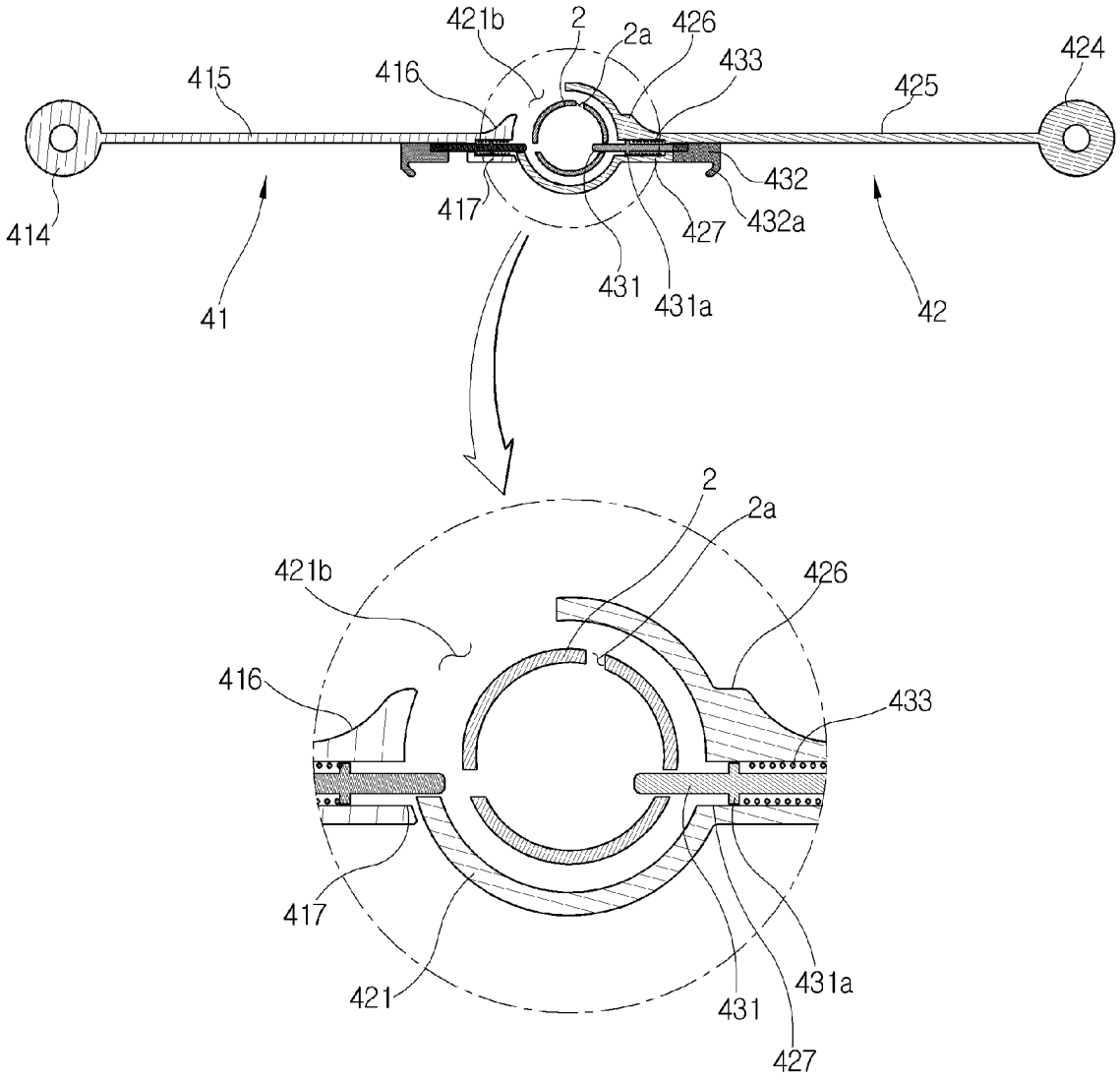
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Fig.17

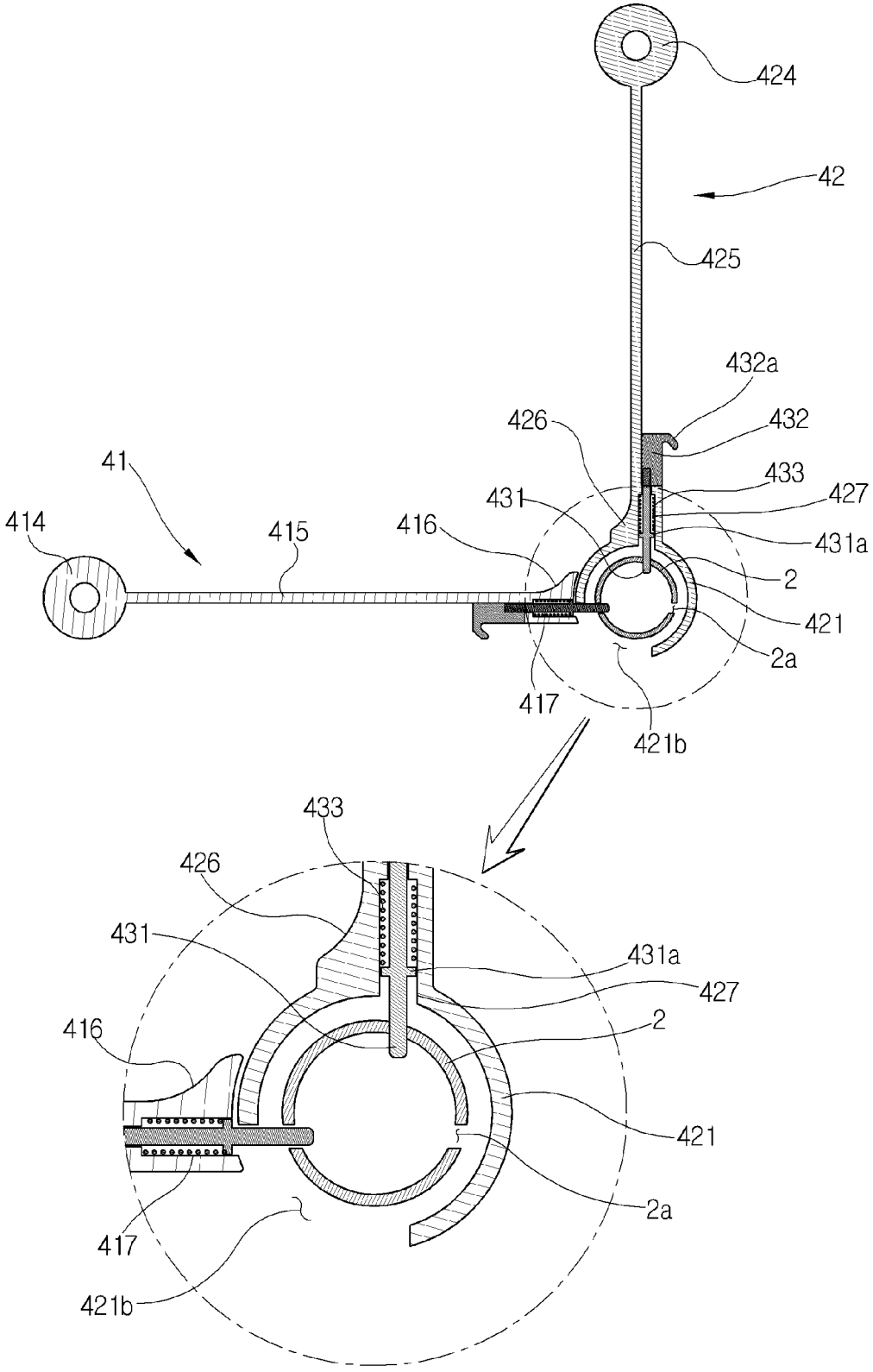
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Fig.18

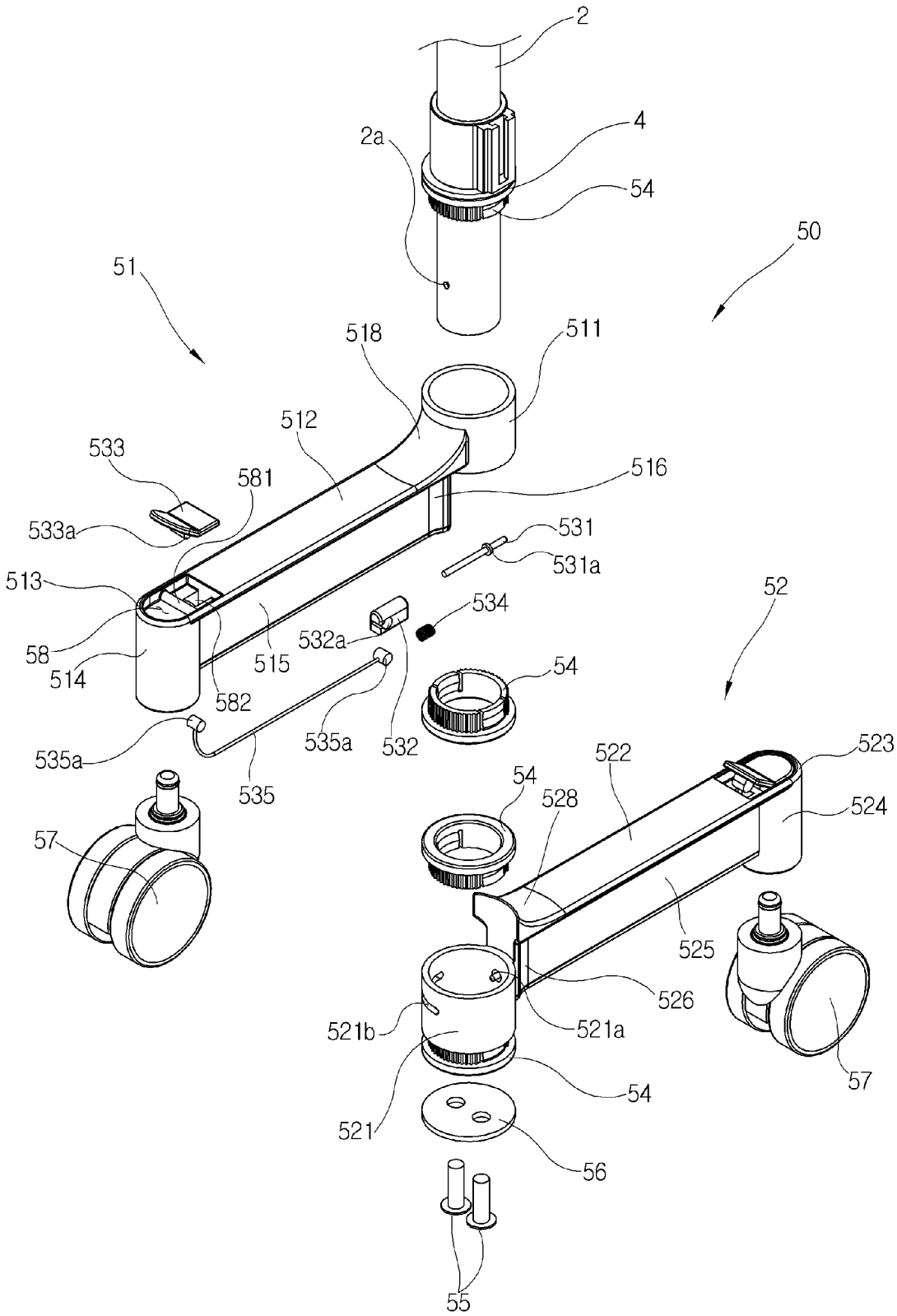
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Fig.19

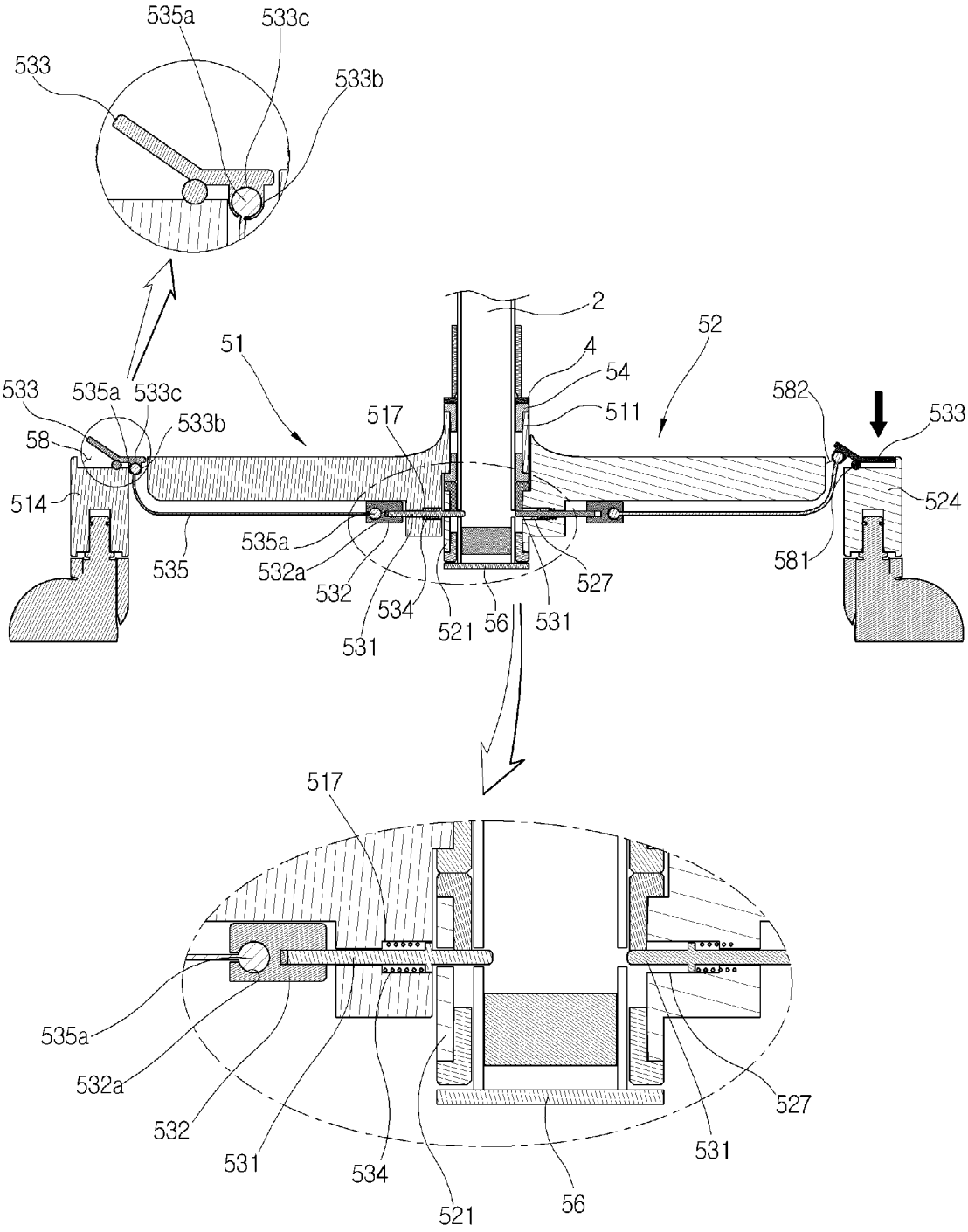
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Fig.20

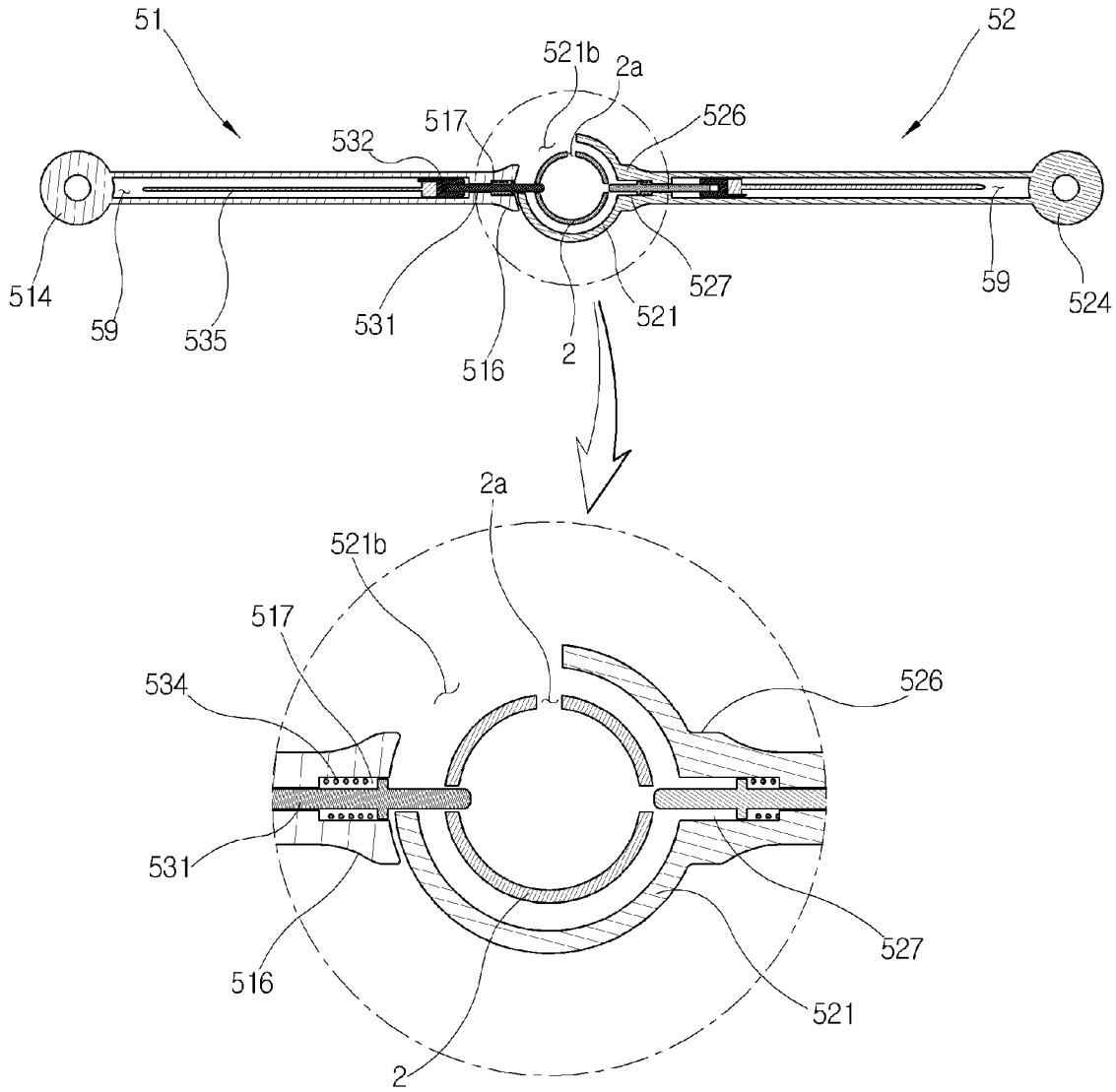
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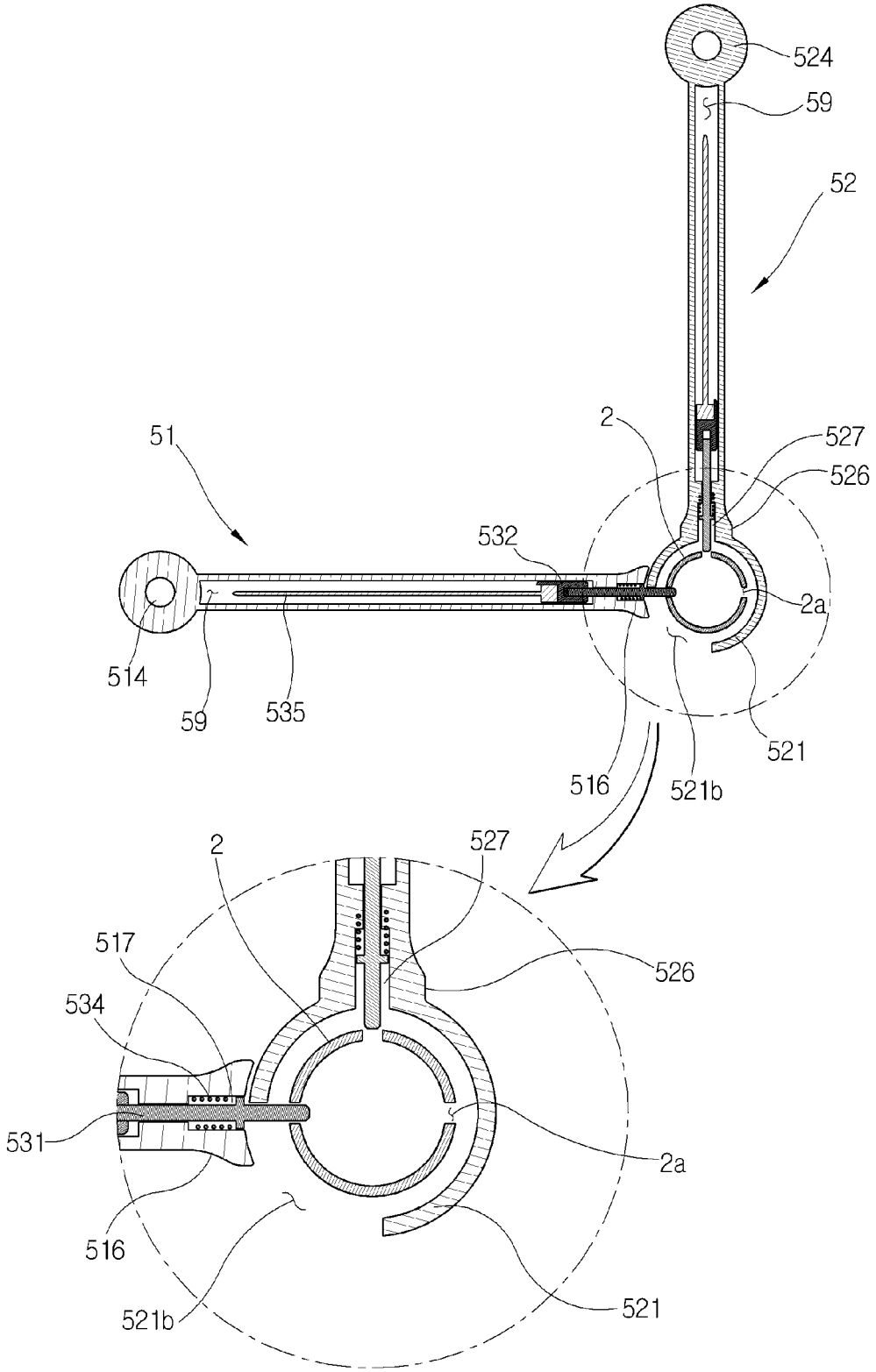
Fig.21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SCREEN BASE

CROSS-REFERENCE(S) TO RELATED APPLICATIONS

This application claims priority to Korean Patent Application Nos. 10-2011-0095476 and 10-2011-0095477, filed on Sep. 21, 2011 which are incorporated herein by reference in their entirety.

BACKGROUND OF THE INVENTION

1. Field of the Invention

Exemplary embodiments of the present invention relate to a screen base for supporting a screen, and more particularly, to a screen base capable of allowing at least one base to be rotatably coupled to a vertical bar which extends to a lower end of a screen, and of adjusting an installation angle of the base.

2. Description of the Related Art

In general, a screen device is to be installed for the purpose of blocking other people's eyes, and includes a frame defining an external appearance, a screen to block other people's eyes, and a base which is provided at a lower end of the frame and supports the screen so that the screen does not fall down.

Particularly, a partition, which is installed in a work space such as an office, is a kind of such a screen device. The screen device installs one screen or connects a plurality of screens to each other to complexly install the screens, thereby partitioning a predetermined space into multiple regions.

Consequently, it may be possible to protect privacy of the members in the office and improve concentration of business. In addition, spaces between respective departments are blocked from the outside to allow creative work to be carried out.

Meanwhile, the typical screen has a thinner thickness than a width. Thus, as also disclosed in Korean Unexamined Utility Model Application Publication No. 20-2009-0005236, published on Jun. 1, 2009 (Patent Document 1), the base, which supports the screen so that the screen does not fall down in a forward or backward direction, is formed at the lower end of the screen to be elongated in forward and backward directions.

Accordingly, there is a problem in that an office floor is kept in poor order after installation of the screen device due to the base protruding from the lower end of the screen. In particular, when the base protrudes toward a passageway, this causes inconvenience during passing of people.

Moreover, this also limits an installation space of the screen. For example, in a case of installing the screen to be adjacent to a wall, the screen is not installed to come into tight contact with the wall, thereby resulting in generation of an unutilized space between the screen and the wall due to the base protruding toward the wall.

SUMMARY OF THE INVENTION

The present invention has been made in view of the above problems, and it is an object of the present invention to provide a screen base including at least one base which is rotatably coupled to a vertical bar extending to a lower end of a screen, and capable of easily adjusting an installation angle of the base.

Other objects and advantages of the present invention can be understood by the following description, and become apparent with reference to the embodiments of the present invention. Also, it is obvious to those skilled in the art to which the present invention pertains that the objects and advantages of the present invention can be realized by the means as claimed and combinations thereof.

In accordance with one aspect of the present invention, a screen base, which is coupled to a vertical bar extending to a lower end of a screen and supports the screen, includes a base including a body which has a hollow shape and is rotatably coupled to the vertical bar, and an extension portion which is formed to extend outward of the vertical bar from the body; and a fixing unit to fix the body with respect to the vertical bar.

The extension portion may be constituted of at least two extension portions which are formed to extend outward of the vertical bar from the body and to be spaced apart from each other by a predetermined angle.

The fixing unit may be a set screw which passes through and is inserted into one side of an outer peripheral surface of the body.

The hollowness of the body may be provided with a bushing, and a rotational friction force of the body may be adjusted with respect to the vertical bar by the set screw which passes through the body and presses the bushing.

In accordance with another aspect of the present invention, the base may include a first base including a first body which has a hollow shape and is rotatably coupled to the vertical bar, and a first extension portion which is formed to extend outward of the vertical bar from the first body; and a second base including a second body which has a hollow shape and is coupled to a lower end of the first body, and a second extension portion which extends outward of the vertical bar from the second body and is formed at a height corresponding to the first extension portion.

The hollowness of the first or second body may be provided with a bushing, the fixing unit may be a set screw which passes through and is inserted into one side of an outer peripheral surface of the first or second body, and a rotational friction force of the first or second body may be adjusted with respect to the vertical bar by the set screw.

The first body may be protrusively formed, at one side thereof, with a first fastening portion to fasten the fixing unit; the second body may be protrusively formed, at one side thereof, with a second fastening portion; and the first and second fastening portions may allow a rotational angle of the second base relative to the first base to be limited.

In accordance with another aspect of the present invention, the fixing unit may include a base pin of which one end is inserted into a fixing hole of the vertical bar; and a switch member which is slidable in a longitudinal direction of the first or second base, the other end of the base pin being coupled to one side of the switch member.

In accordance with a further aspect of the present invention, the fixing unit may include a base pin of which one end is inserted into a fixing hole of the vertical bar; a pin connector which is slidable in a longitudinal direction of the first or second base, the other end of the base pin being coupled to one side of the pin connector; a foot switch member which is hinge-coupled to an upper side of the first or second base so as to be rotatable in an upward and downward direction; and a wire cable to connect a lower end of the foot switch member and the other side of the pin connector.

The fixing unit may further include an elastic member to elastically support the base pin toward the vertical bar.

The second body may be formed, at one side thereof, with a through hole while being formed, at the other end thereof, with a cutting groove which is cut by a predetermined angle in a circumferential direction thereof, and a rotational angle of

the first base relative to the second base may be limited by a base pin of the first base which is inserted into the cutting groove.

It is to be understood that both the foregoing general description and the following detailed description of the present invention are exemplary and explanatory and are intended to provide further explanation of the invention as claimed.

BRIEF DESCRIPTION OF THE DRAWINGS

The above and other objects, features and other advantages of the present invention will be more clearly understood from the following detailed description taken in conjunction with the accompanying drawings, in which:

FIG. **1** is an exploded perspective view of a screen base in accordance with a first embodiment of the present invention;

FIG. **2** is an operation state view of the screen base in accordance with the first embodiment of the present invention;

FIG. **3** is a use state view illustrating an installation example of the screen base in accordance with the first embodiment of the present invention;

FIG. **4** is an exploded perspective view of a screen base in accordance with a second embodiment of the present invention;

FIG. **5** is a coupled view of FIG. **4**;

FIG. **6** is a use state view illustrating an installation example of the screen base in accordance with the second embodiment of the present invention;

FIG. **7** is an exploded perspective view of a screen base in accordance with a third embodiment of the present invention;

FIG. **8** is a coupled cross-sectional view of FIG. **7**;

FIG. **9** is a coupled view of FIG. **7**;

FIG. **10** is a side view of FIG. **9**;

FIG. **11** is an operation state view illustrating an example in which a pair of bases is spread at an angle of 180° in accordance with the third embodiment of the present invention;

FIG. **12** is an operation state view illustrating an example in which a pair of bases is spread at an angle of 90° in accordance with the third embodiment of the present invention;

FIG. **13** is an exploded perspective view of a screen base in accordance with a fourth embodiment of the present invention;

FIG. **14** is a coupled view of FIG. **13**;

FIG. **15** is a cross-sectional view of FIG. **14**;

FIG. **16** is an operation state view illustrating an example in which a pair of bases is spread at an angle of 180° in accordance with the fourth embodiment of the present invention;

FIG. **17** is an operation state view illustrating an example in which a pair of bases is spread at an angle of 90° in accordance with the fourth embodiment of the present invention;

FIG. **18** is an exploded perspective view of a screen base in accordance with a fifth embodiment of the present invention;

FIG. **19** is a coupled cross-sectional view of FIG. **18**;

FIG. **20** is an operation state view illustrating an example in which a pair of bases is spread at an angle of 180° in accordance with the fifth embodiment of the present invention; and

FIG. **21** is an operation state view illustrating an example in which a pair of bases is spread at an angle of 90° in accordance with the fifth embodiment of the present invention.

DESCRIPTION OF SPECIFIC EMBODIMENTS

Hereinafter, a screen base according to exemplary embodiments of the present invention will be described in more detail with reference to the accompanying drawings. In the description, the thickness of each line or the size of each component illustrated in the drawings may be exaggerated for convenience of description and clarity.

The terminology used in the present embodiments is to be defined in considering the function of the component of the present invention only and may be varied depending on the intention of a user or operator or the practice. Therefore, the definition of this terminology will be given based on the contents throughout the embodiments set forth herein.

In addition, the following embodiments are for the purpose of describing the components set forth in the appended claims only and are not intended to limit the spirit and scope of the invention. More particularly, various variations and modifications are possible in concrete constituent elements of the embodiments, and it is to be understood that differences relevant to the variations and modifications fall within the spirit and scope of the present disclosure defined in the appended claims.

First Embodiment

FIG. **1** is an exploded perspective view of a screen base in accordance with a first embodiment of the present invention.

As shown in FIG. **1**, the screen base, which is designated by reference numeral **10**, according to the first embodiment of the present invention is rotatably coupled to a vertical bar **2** which extends to a lower end of a screen **1**, and supports the screen **1** so that the screen **1** does not fall down.

In more detail, the screen base **10** according to the first embodiment of the present invention includes a base **11** which is rotatably coupled to a lower end portion of the vertical bar **2**, and a fixing unit to fix the base **11** with respect to the vertical bar **2**.

Here, the base **11** includes a hollow cylindrical body **111** for inserting the vertical bar **2**, and a pair of extension portions **112** which faces each other about the body **111** and respectively extends outward of the vertical bar **2**.

Also, the fixing unit may be constituted of a set screw **13** which passes through one side of an outer peripheral surface of the body **111** and is inserted into the body **111**.

That is, the body **111** may be rotated along an outer peripheral surface of the vertical bar **2** in a circumferential direction thereof, and the pair of extension portions **112** is fixed, along with the body **111**, to the vertical bar **2** by the set screw **13** which passes through and is inserted into the body **111**.

Accordingly, in a state of inserting the body of the screen base **10** into the outer peripheral surface of the vertical bar **2**, a user may rotate the screen base **10** so that the pair of extension portions **112** makes a proper angle with respect to the vertical bar **2**, and then fix a position of the screen base **10** by inserting the set screw **13** into the body **111**.

The vertical bar **2** extends to a lower end of a screen frame **3** so that the screen **1** is spaced apart from the ground. The vertical bar **2** may have a circular or polygonal cross-section shape, and have a hollow pipe shape in order to attain a reduction in materials and weight.

The body **111** has a hollow cylindrical shape, and the above-mentioned vertical bar **2** is rotatably coupled to the hollowness of the body **111**. In this case, in order for the vertical bar **2** to be smoothly rotated relative to the body **111**, the hollowness of the body **111** may be provided, at respective upper and lower ends thereof, with bushings **14** which are made of, for example, a plastic material such as polyacetal (POM), and the lower end of the vertical bar **2** may be coupled to a lower end cover **16** using fasteners **15** such as a bolt.

In the screen base **10** according to the first embodiment of the present invention, the body **111** and the pair of extension

portions **112** are integrally formed, and the pair of extension portions **112** is formed to face each other about the body **111**. That is, the pair of extension portions **112** is formed to extend from the body **111** in respective opposite directions, thereby being made at an angle of 180° therebetween.

In this case, each of the extension portions **112** has a predetermined width, and is formed in a plate shape having a longer length than the width. The extension portion **112** has an end formed in a rounded shape, and the rounded end of the extension portion **112** is formed with a round portion **113** having an arc shape.

The round portion **113** is formed, at a lower end thereof, with a cylindrical support portion **114** which is formed to extend downwards from the lower end thereof. The support portion **114** may be directly supported on the ground, or be provided, at a lower end thereof, with a caster **17** as shown in FIG. **1** so that the screen **1** is moved along with the screen base **10**.

Furthermore, the extension portion **112** is formed, at a lower end thereof, with a reinforced portion **115** in a downward direction thereof. The reinforced portion **115** is formed along a longitudinal direction of the extension portion **112**. The reinforced portion **115** is connected, at one end thereof, to one side of the body **111** while being connected, at the other end thereof, to one side of the support portion **114**. In this case, one end of the reinforced portion **115** abutting on the body **111** may be formed with a flange portion **116** which has an increasing thickness as going toward the body **111**, in order to reinforce rigidity of the extension portion **112**.

In addition, the extension portion **112** is formed, at an upper side thereof adjacent to the body **111**, with a connection portion **117** which is inclined upwards toward the body **111**. The connection portion **117** has a curved surface at an upper side thereof so as to enclose the outer peripheral surface of the vertical bar **2** together with the flange portion **116** during the assembly of the vertical bar **2** and the body **111**, thereby providing an aesthetically external appearance.

The outer peripheral surface of the body **111** is formed with at least one through hole **118**. The set screw **13** is inserted into the through hole **118**, and is tightly supported, at a tip thereof, on an outer peripheral surface of each bushing **14** within the hollowness of the body.

Accordingly, a clearance between the vertical bar **2** and the bushing **14** may be adjusted by screwing or unscrewing the set screw **13**, thereby enabling the adjustment of the rotational friction force of the screen base **10** with respect to the vertical bar **2**.

As an alternative example, the vertical bar **2** may also be formed with a fixing hole (not shown) corresponding to the through hole **118** of the body **111** during the assembly of the vertical bar **2** and the screen base **10**, such that the tip of the set screw **13** is inserted into or thread-coupled to the fixing hole so as to fix the position of the screen base **10**. In addition, the set screw **13** may be constituted of, for example, a wing bolt to facilitate the grasp and operation thereof.

Meanwhile, the outer peripheral surface of the vertical bar **2** is protrusively formed with a catch part **4** for serving to limit an insertion distance of the vertical bar **2**, and a lower end edge of the catch part **4** is caught and supported by an upper end edge of the bushing **14**.

FIG. **2** is an operation state view of the screen base in accordance with the first embodiment of the present invention, and FIG. **3** is a use state view illustrating an installation example of the screen base in accordance with the first embodiment of the present invention.

As shown in FIG. **2**(*a*), a user may arrange the screen base **10** so that the screen base **10** makes a right angle with respect to the screen **1**. In this case, the bushing **14** comes into tight contact with the vertical bar **2** by the set screw **13** which passes through and inserted into the body **111** to allow an installation angle of the screen base **10** to be fixed.

As shown in FIG. **2**(*b*), in a state of changing the installation angle of the screen base **10**, a user may rotate the screen base **10** at a proper angle by unscrewing the set screw **13**, and then fix the screen base **10** at a desired position by screwing the set screw **13**.

Similarly, FIG. **2**(*c*) illustrates an example in which the screen base **10** is rotated to be parallel with the screen **1** and is then fixed.

FIG. **3** illustrates an example of partitioning a space by connecting and installing a plurality of the screens **1**. In the example of FIG. **3**, the screen base **10** according to the first embodiment of the present invention is provided at the lower end of one side of each screen **1**, whereas the caster **17** is coupled to the lower end of the vertical bar **2** without the screen base **10** at the lower end of the other side of the screen **1**.

In this case, the screen base **10** may be installed in parallel with the screen **1** at the outside, namely, a portion corresponding to a passageway, of the space partitioned by the screen **1** so that the screen base **10** does not protrude to the passageway. The screen base **10** is installed at a lower end of each screen **1***a* which is arranged perpendicular to the passageway so that so that the screen base **10** makes a right angle with to the screen **1***a*. The screen base **10** is installed at a lower end of a screen **1***b* adjacent to the screen **1***a* so as to be rotated at an angle of 45° with respect to the screen **1***b*. In accordance with such a configuration, the connected entire screens **1** are supported so as not to fall down.

In addition, although the screen base **10** has been illustrated as being provided at only the lower end of one side of each screen **1** in the example of FIG. **3**, all lower ends of both sides of the screen **1** may also be provided with the screen base **10** according to the first embodiment of the present invention.

Second Embodiment

FIG. **4** is an exploded perspective view of a screen base in accordance with a second embodiment of the present invention, and FIG. **5** is a coupled view of FIG. **4**.

The screen base, which is designated by reference numeral **20**, according to the second embodiment of the present invention is entirely similar to the screen base of the above-mentioned first embodiment. However, there is a difference in that a pair of extension portions **212** is made at an angle of 90° therebetween and connection portions **217**, which are formed to extend from the respective extension portions **212** toward a body **211**, are joined to each other so as to be integrally formed. Therefore, no description with respect to configurations which repeat or are similar to the above-mentioned first embodiment will be given in more detail.

The screen base **20** according to the second embodiment of the present invention includes a base **21** which is rotatably coupled to the lower end portion of the vertical bar **2**, and a fixing unit to fix the base **21** with respect to the vertical bar **2**.

Here, the base **21** includes the hollow body **211** for coupling the vertical bar **2**, and the pair of extension portions **212** which is integrally formed with the body **211** while being made at an angle of 90° therebetween.

In this case, each of the extension portions **212** is formed, at one end thereof, with a round portion **213** having an arc shape. The round portion **213** is formed, at a lower end thereof, with a cylindrical support portion **214** which extends downwards from the lower end thereof. The extension portion

212 is formed, at a lower end thereof, with a reinforced portion 215 along a longitudinal direction thereof. The support portion 214 is coupled with a caster 27 as occasion demands.

The reinforced portion 215 is formed, at one end thereof, with a flange portion 216 connected to an outer peripheral surface of the body 211 while being connected, at the other end thereof, to one side of the support portion 214, thereby reinforcing rigidity of the extension portion 212.

In addition, the extension portions 212 are formed, at respective upper sides thereof adjacent to the body 211, with the connection portions 217 which have a curved surface to be inclined upwards toward the body 211. Each of the connection portions 217 encloses the outer peripheral surface of the vertical bar 2 together with the flange portion 216 during the assembly of the vertical bar 2 and the body 211, thereby providing an aesthetically external appearance.

In addition, the hollowness of the body 211 is provided, at respective upper and lower ends thereof, with bushings 24 which are made of, for example, a plastic material such as polyacetal (POM) in order for the vertical bar 2 to be smoothly rotated relative to the body 211. The lower end of the vertical bar 2 is coupled to a lower end cover 26 using fasteners 25 such as a bolt.

Thus, the screen base 20 according to the second embodiment of the present invention may be rotated about the vertical bar 2. A user may rotate the screen base 20 at a proper angle and then insert a set screw 23 via a through hole 218 of the body 211, thereby fixing an installation position of the screen base 20.

In this case, the set screw 23 is tightly supported, at a tip thereof, on an outer peripheral surface of each bushing 24, and a clearance between the vertical bar 2 and the bushing 24 is adjusted by screwing or unscrewing the set screw 23, thereby enabling the adjustment of the rotational friction force between the screen base 20 and the vertical bar 2. As an alternative example, the tip of the set screw 23 may be inserted into or thread-coupled to a fixing hole (not shown) of the vertical bar 2 so as to fix a rotational angle of the screen base 20 with respect to the vertical bar 2, and this is similar to the above-mentioned configuration.

Meanwhile, one side of the outer peripheral surface of the vertical bar 2 which extends to the lower end of the screen frame 3 is protrusively formed with the catch part 4 for serving to limit the insertion distance of the vertical bar 2, and the lower end edge of the catch part 4 is caught and supported by an upper end edge of the bushing 24.

FIG. 6 is a use state view illustrating an installation example of the screen base in accordance with the second embodiment of the present invention.

FIG. 6 illustrates an example of partitioning a space by connecting and installing a plurality of the screens 1. In the example of FIG. 6, the screen base 20 according to the second embodiment of the present invention is provided at the lower end of one side of each screen 1, whereas the caster 27 is coupled to the lower end of the vertical bar 2 without the screen base 20 at the lower end of the other side of the screen 1.

In this case, in order for the screen base 20 not to protrude to the outside, namely, a portion corresponding to a passageway, of the space partitioned by the screen 1, the screen base 20 may be installed so that one extension portion 212 is located in parallel with the screen 1 and the other extension portion 212 protrudes to the inside of the space. At a lower end of each screen 1*a* which is arranged perpendicular to the passageway, the screen 1*a* is located between the pair of extension portions 212, such that the connected entire screens 1 are supported so as not to fall down.

Meanwhile, although the screen base 20 has been illustrated as being provided at only the lower end of one side of each screen 1 in the example of FIG. 6, both lower ends of the screen 1 may also be provided with the screen base 20 according to the second embodiment of the present invention.

In addition, the present invention may be utilized in such a manner that a portion of the screens 1 is coupled with the screen base 10 according to the first embodiment and the other portion is coupled with the screen base 20 according to the second embodiment.

Third Embodiment

FIG. 7 is an exploded perspective view of a screen base in accordance with a third embodiment of the present invention.

The screen base, which is designated by reference numeral 30, according to the third embodiment of the present invention is entirely similar to the screen bases of the above-mentioned first and second embodiments. However, there is a difference in that a pair of bases 31 and 32 is rotatably coupled relative to each other. Therefore, no description with respect to configurations which repeat or are similar to the above-mentioned embodiments will be given in more detail.

In the screen base 30 according to the third embodiment of the present invention, the first base 31 and the second base 32 are rotatably coupled relative to the vertical bar 2.

Here, the first base 31 includes a first hollow cylindrical body 311 for inserting the vertical bar 2, and a first extension portion 312 which extends outward of the vertical bar 2 from one side of the first body 311.

In this case, the first body 311 may be rotated along the outer peripheral surface of the vertical bar 2 in the circumferential direction thereof. The first extension portion 312 is fixed, along with the first body 311, to the vertical bar 2 by a set screw 33 which passes through and is inserted into the first body 311.

The second base 32 includes a second hollow cylindrical body 321 for inserting the vertical bar 2, and a second extension portion 322 which extends outward of the vertical bar 2 from one side of the second body 321.

In this case, the second body 321 may be rotated along the outer peripheral surface of the vertical bar 2 in the circumferential direction thereof. The second extension portion 322 is fixed, along with the second body 321, to the vertical bar 2 by another set screw 33 which passes through and is inserted into the second body 321.

During the assembly of the first and second bases 31 and 32 to the vertical bar 2, the second body 321 is located at a lower end of the first body 311 and the first and second extension portions 312 and 322 are located at the same height as each other. For this reason, the first extension portion 312 may extend outward of the vertical bar 2 from one side of the lower end of the first body 311, and the second extension portion 322 may extend outward of the vertical bar 2 from one side of an upper end of the second body 321.

Accordingly, in a state of inserting the first body 311 of the first base 31 and the second body 321 of the second base 32 into the outer peripheral surface of the vertical bar 2, a user rotates the first base 31 so that the first base 31 makes a proper angle with respect to the vertical bar 2, and then fixes a position of the first base 31 by inserting the set screw 33 into the first body 311. Subsequently, a user rotates the second base 32 at a proper angle, and then fixes a position of the second base 32 by inserting another set screw 33 into the second body 321.

In this case, the vertical bar **2** extends to the lower end of the screen frame **3** (see FIG. **8**) so that the screen **1** is spaced apart from the ground. The vertical bar **2** may have a circular or polygonal cross-section shape, and have a hollow pipe shape in order to attain a reduction in materials and weight.

The first and second bodies **311** and **321** have a hollow cylindrical shape, and the above-mentioned vertical bar **2** is rotatably coupled to the hollowness of each of the first and second bodies **311** and **321**. In this case, in order for the vertical bar **2** and the first and second bodies **311** and **321** to be smoothly rotated relative to one another, the hollowness of each of the first and second bodies **311** and **321** may be provided, at respective upper and lower ends thereof, with bushings **34** which are made of, for example, a plastic material such as polyacetal (POM), and the lower end of the vertical bar **2** may be coupled to a lower end cover **36** using fasteners **35** such as a bolt.

In this case, the first and second extension portions **312** and **322** have a predetermined width, and are formed in a plate shape having a longer length than the width. The first and second extension portions **312** and **322** respectively have ends formed in a rounded shape, and the rounded ends of the first and second extension portions **312** and **322** are respectively formed with a first round portion **313** and a second round portion **323** which have an arc shape.

The first and second round portions **313** and **323** are formed, at respective lower ends thereof, with a first cylindrical support portion **314** and a second cylindrical support portion **324** which are formed to extend downwards from the lower ends thereof. The first and second support portions **314** and **324** may be directly supported on the ground, or be provided, at respective lower ends thereof, with casters **37** as shown in FIG. **7** so that the screen **1** is movable.

Furthermore, the first and second extension portions **312** and **322** are formed, at lower ends thereof, with first and second reinforced portions **315** and **325** in downward directions thereof, respectively. The first and second reinforced portions **315** and **325** are respectively formed along longitudinal directions of the first and second extension portions **312** and **322**. Each of the first and second reinforced portions **315** and **325** is connected, at one end thereof, to one side of each of the first and second bodies **311** and **321** while being connected, at the other end thereof, to one side of each of the first and second support portions **314** and **324**. In this case, one end of the associated first or second reinforced portion **315** or **325** abutting on each of the first and second bodies **311** and **321** may be formed with an associated first or second flange portion **316** or **326** which has an increasing thickness as going toward each first or second body **311** or **321**, in order to reinforce rigidity of each of the first and second extension portions **312** and **322**.

In addition, the first and second extension portions **312** and **322** are formed, at upper sides thereof adjacent to the first and second bodies **311** and **321**, with first and second connection portions **317** and **327** which are inclined upwards toward the first and second bodies **311** and **321**, respectively. Each of the first and second connection portions **317** and **327** has a curved surface at an upper side thereof, thereby providing an aesthetically external appearance.

The outer peripheral surfaces of the first and second bodies **311** and **321** are formed with first and second through holes **318** and **328**, respectively. The set screws **33** are respectively inserted into the first and second through holes **318** and **328**, and a tip of each of the set screws **33** is tightly supported on an outer peripheral surface of each bushing **34** within the hollowness of each of the first and second bodies **311** and **321**.

Accordingly, a clearance between the vertical bar **2** and the bushing **34** may be adjusted by screwing or unscrewing each set screw **33**, thereby enabling the adjustment of the rotational friction force of each first or second base **31** or **32** with respect to the vertical bar **2**.

As an alternative example, the vertical bar **2** may also be formed with fixing holes (not shown) corresponding to the first and second through holes **318** and **328** of the respective first and second bodies **311** and **321** during the assembly of the vertical bar **2** and the first and second bases **31** and **32**, such that the tips of the set screws **33** are inserted into or thread-coupled to the fixing holes so as to fix the positions of the first and second bases **31** and **32**, respectively. In addition, each set screw **33** may be constituted of, for example, a wing bolt to facilitate the grasp and operation thereof.

Meanwhile, one side of the outer peripheral surface of the vertical bar **2** is protrusively formed with the catch part **4** for serving to limit the insertion distance of the vertical bar **2**, and the lower end edge of the catch part **4** is caught and supported by an upper end edge of the bushing **34**.

FIG. **8** is a coupled cross-sectional view of FIG. **7**, FIG. **9** is a coupled view of FIG. **7**, and FIG. **10** is a side view of FIG. **9**.

As shown in FIGS. **8** to **10**, one side of the first body **311** is protrusively formed with a first fastening portion **319** to fasten the set screw **33**, whereas one side of the second body **321** is protrusively formed with a second fastening portion **329**.

In this case, the first fastening portion **319** makes an angle of approximately 135° with the first extension portion **312** about a center axis of the first body **311**, whereas the second fastening portion **329** makes an angle of approximately 45° with the second extension portion **322** about a center axis of the second body **321**. That is, an angle between the first and second fastening portions **319** and **329** is approximately 90°, and this allows the angle at which the first and second bases **31** and **32** are rotated with each other to be limited at the minimum angle of 90°, as will be described later in FIG. **12**.

In other words, the first and second fastening portions **319** and **329** are protrusively formed from the edges of the first and second through holes **318** and **328** of the respective first and second bodies **311** and **321** to the outside thereof to direct fastening positions of the respective set screws **33**. Also, the first and second fastening portions **319** and **329** serve as stoppers to limit the rotational angle of the first base **31** relative to the second base **32**. These configuration and operation will be described later.

FIG. **11** is an operation state view illustrating an example in which a pair of bases is spread at an angle of 180° in accordance with the third embodiment of the present invention, and FIG. **12** is an operation state view illustrating an example in which a pair of bases is spread at an angle of 90° in accordance with the third embodiment of the present invention.

On the basis of the vertical bar **2** in FIG. **11**, the first base **31** is illustrated at the left side in the drawing, whereas the second base **32** is illustrated at the right side in the drawing. The first and second fastening portions **319** and **329** are respectively located at both sides of the second base **32** so as to be adjacent to each other.

In this case, when the second base **32** is rotated in a clockwise direction in the drawing in a state where the first base **31** is left as it is, the second base **32** may be rotated until making an angle of 90° with the first base **31** as shown in FIG. **12**, such that the second fastening portion **329** of the second base **32** is caught by the first flange portion **316** of the first base **31** so as to prevent further rotation of the second base **32**.

On the other hand, when the first base **31** is rotated in a counterclockwise direction in a state where the second base

32 is left as it is, the first flange portion **316** of the first base **31** is caught by the second fastening portion **329** of the second base **32** so as to prevent further rotation of the first base **31**. Consequently, the first base **31** makes an angle of 90° with the second base **32**.

That is, the rotational angle of the second base **32** relative to the first base **31** may be limited depending on a position of the first fastening portion **319**, a shape of the first flange portion **316**, a position of the second fastening portion **329**, and a shape of the second flange portion **326**. Also, the minimum or maximum angle at which the first and second bases **31** and **32** are rotated with each other may be arbitrarily set by changing the above-mentioned position of the first fastening portion **319**, etc., on occasion demands.

In this case, the set screws **33** are inserted into and screwed to the first and second fastening portions **319** and **329**, respectively, such that the installation portions of the first and second bases **31** and **32** are fixed with respect to the vertical bar **2**.

Fourth Embodiment

FIG. **13** is an exploded perspective view of a screen base in accordance with a fourth embodiment of the present invention, FIG. **14** is a coupled view of FIG. **13**, and FIG. **15** is a cross-sectional view of FIG. **14**.

The screen base, which is designated by reference numeral **40**, according to the fourth embodiment of the present invention includes a base which is rotatably coupled to the lower end portion of the vertical bar **2**, and a fixing unit to fix the base with respect to the vertical bar **2**.

In this case, the base may be constituted of a pair of first base **41** and second base **42**. The first base **41** and the second base **42** are rotatably coupled relative to the vertical bar **2** extending to the lower end of the screen, thereby supporting the screen so that the screen does not fall down.

Here, the first base **41** includes a first hollow cylindrical body **411** for inserting the vertical bar **2**, and a first extension portion **412** which extends outward of the vertical bar **2** from one side of the first body **411**. The first body **411** may be rotated along the outer peripheral surface of the vertical bar **2** in the circumferential direction thereof.

The second base **42** includes a second hollow cylindrical body **421** for inserting the vertical bar **2**, and a second extension portion **422** which extends outward of the vertical bar **2** from one side of the second body **421**. The second body **421** may be rotated along the outer peripheral surface of the vertical bar **2** in the circumferential direction thereof.

During the assembly of the first and second bases **41** and **42** to the vertical bar **2**, the second body **421** is located at a lower end of the first body **411** and the first and second extension portions **412** and **422** are located at the same height as each other. For this reason, the first extension portion **412** may extend outward of the vertical bar **2** from one side of the lower end of the first body **411**, and the second extension portion **422** may extend outward of the vertical bar **2** from one side of an upper end of the second body **421**.

Accordingly, a user may rotate the first base **41** so that the first base **41** makes a proper angle with respect to the vertical bar **2** in a state of inserting the first body **411** of the first base **41** and the second body **421** of the second base **42** into the outer peripheral surface of the vertical bar **2**. The first and second bases **41** and **42** are fixed with respect to the vertical bar **2** by inserting each base pin **431** of the fixing unit to be described later into an associated fixing hole **2***a* of the vertical bar **2**.

In this case, the fixing hole **2***a* of the vertical bar **2** may be formed as plural in number on the outer peripheral surface of the vertical bar **2**, corresponding to an angle at which the first and second bases **41** and **42** are rotated. For example, the fixing holes **2***a* may be formed at equal intervals of 30° along the circumferential direction of the vertical bar **2**.

Here, the vertical bar **2** may have a circular or polygonal cross-section shape, and have a hollow pipe shape in order to attain a reduction in materials and weight. The one or more fixing holes **2***a* are formed to be spaced apart from one another by a predetermined distance along the outer peripheral surface of the vertical bar **2** in the circumferential direction thereof.

The first and second bodies **411** and **421** have a hollow cylindrical shape, and the above-mentioned vertical bar **2** is rotatably coupled to the hollowness of each of the first and second bodies **411** and **421**. In this case, in order for the vertical bar **2** and the first and second bodies **411** and **421** to be smoothly rotated relative to one another, the hollowness of each of the first and second bodies **411** and **421** may be provided, at respective upper and lower ends thereof, with bushings **44** which are made of, for example, a plastic material such as polyacetal (POM), and the lower end of the vertical bar **2** may be coupled to a lower end cover **46** using fasteners **45** such as a bolt.

In this case, the first and second extension portions **412** and **422** have a predetermined width, and are formed in a plate shape having a longer length than the width. The first and second extension portions **412** and **422** respectively have ends formed in a rounded shape, and the rounded ends of the first and second extension portions **412** and **422** are respectively formed with a first round portion **413** and a second round portion **423** which have an arc shape.

The first and second round portions **413** and **423** are formed, at respective lower ends thereof, with a first cylindrical support portion **414** and a second cylindrical support portion **424** which are formed to extend downwards from the lower ends thereof. The first and second support portions **414** and **424** may be directly supported on the ground, or be provided, at respective lower ends thereof, with casters **47** as shown in FIGS. **13** and **14** so that the screen is movable.

Furthermore, the first and second extension portions **412** and **422** are formed, at lower ends thereof, with first and second reinforced portions **415** and **425** in downward directions thereof, respectively. The first and second reinforced portions **415** and **425** are respectively formed along longitudinal directions of the first and second extension portions **412** and **422**. Each of the first and second reinforced portions **415** and **425** is connected, at one end thereof, to one side of each of the first and second bodies **411** and **421** while being connected, at the other end thereof, to one side of each of the first and second support portions **414** and **424**.

In this case, one side of the associated first or second reinforced portion **415** or **425** abutting on each of the first and second bodies **411** and **421** may be formed with an associated first or second flange portion **416** or **426** (see FIG. **16**) which has an increasing thickness as going toward each first or second body **411** or **421**. The other side of the first or second reinforced portion **415** or **425** is formed with an associated first or second base pin receiving portion **417** or **427** so as to receive each base pin **431** to be described later.

In addition, the first and second extension portions **412** and **422** are formed, at upper sides thereof adjacent to the first and second bodies **411** and **421**, with first and second connection portions **418** and **428** which are inclined upwards toward the first and second bodies **411** and **421**, respectively. Each of the first and second connection portions **418** and **428** has a curved

surface at an upper side thereof, thereby providing an aesthetically external appearance.

Meanwhile, the outer peripheral surface of the vertical bar **2** is protrusively formed with the catch part **4** for serving to limit the insertion distance of the vertical bar **2**, and the lower end edge of the catch part **4** is caught and supported by an upper end edge of the bushing **44**.

In accordance with the present embodiment, the first and second bases **41** and **42** may be respectively provided with the fixing units to fix the first and second bases **41** and **42** at any rotation position with respect to the vertical bar **2**. However, since the fixing units of the respective first and second bases **41** and **42** have the same configuration and operation, the fixing unit of the first base **41** as an example will be described with respect to the configuration and operation thereof below.

The fixing unit of the first base **41** includes the base pin **431** inserted into the fixing hole **2***a* of the vertical bar **2**, and a switch member **432** which is coupled to one side of the first reinforced portion **415** so as to be slidable in the longitudinal direction of the first base **41** while the other end of the base pin **431** is coupled to one side of the switch member **432**. The base pin **431** may be provided, at one side thereof, with an elastic member **433** to elastically support the base pin **431** toward the vertical bar **2**.

Here, the switch member **432** is slidably coupled to one side of the first reinforced portion **415**. Although not shown in the drawings, for example, one side of the first reinforced portion **415** is formed with a pair of rails which vertically faces each other and has a "]" shape in cross-section, so that upper and lower edges of the switch member **432** are inserted into and supported by the pair of rails to allow the switch member **432** to be slidable. In this case, one side of the switch member **432** may be protrusively formed with a grasp portion **432***a* to facilitate the grasp of the switch member **432**.

In one side of the first reinforced portion **415**, the base pin **431** passes through the above-mentioned first base pin receiving portion **417**. Subsequently, the base pin **431** is inserted, at one end thereof, into the fixing hole **2***a* of the vertical bar **2** while being coupled, at the other end thereof, to one side of the switch member **432**, such that one end of the base pin **431** is inserted into the fixing hole **2***a* of the vertical bar **2** or is released from the inserted state into the fixing hole **2***a* of the vertical bar **2** during movement of the switch member **432** in a left or right direction.

In this case, one side of the base pin **431** is formed with a catch portion **431***a*, and the elastic member **433** such as a coil spring is interposed between the catch portion **431***a* and an inner wall of the first base pin receiving portion **417**. Consequently, the base pin **431** is elastically supported toward the vertical bar **2** by the elastic member **433**.

Accordingly, when the switch member **432** is moved outward of the vertical bar **2** in a state where the grasp portion **432***a* of the switch member **432** is caught, the base pin **431** is separated from the fixing hole **2***a* of the vertical bar **2** along with compression of the elastic member **433**, thereby enabling rotation of the first base **41**. On the other hand, when the first base **41** is rotated at a proper angle and then the switch member **432** is released from the caught state, the base pin **431** is moved toward the vertical bar **2** due to the elastic force of the elastic member **433** and the tip of the base pin **431** is inserted into the fixing hole **2***a*. Consequently, the first base **41** may be fixed in position.

Meanwhile, the rotational angle of the second base **42** relative to the first base **41** may be limited by a cutting groove **421***b* which is cut and formed on the outer peripheral surface of the second body **421** in the circumferential direction thereof by a predetermined angle.

That is, as shown in FIG. **13**, the second body **421** is formed, at one side thereof, with a through hole **421***a* for inserting the base pin **431** of the second base **42** while being formed, at the other side thereof facing the one side, with the cutting groove **421***b* which is cut by a predetermined angle in the circumferential direction. The base pin **431** of the first base **41** is inserted through the cutting groove **421***b* and is caught by both ends of the cutting groove **421***b* during the rotation of the second base **42** relative to the first base **41**, thereby limiting the rotational angle of the second base **42**. These configuration and operation will be described below.

FIG. **16** is an operation state view illustrating an example in which a pair of bases is spread at an angle of 180° in accordance with the fourth embodiment of the present invention, and FIG. **17** is an operation state view illustrating an example in which a pair of bases is spread at an angle of 90° in accordance with the fourth embodiment of the present invention.

On the basis of the vertical bar **2** in FIG. **16**, the first base **41** is illustrated at the left side in the drawing, whereas the second base **42** is illustrated at the right side in the drawing. In a state where the base pin **431** of the first base **41** is inserted into the cutting groove **421***b* of the second body **421** and the base pin **431** of the second base **42** is inserted into the fixing hole **2***a* of the vertical bar **2** via the through hole **421***a* of the second body **421**, the first and second bases **41** and **42** are spread at an angle of the 180° with respect to the vertical bar **2**.

In this case, when the base pin **431** of the second base **42** is released from the inserted state into the vertical bar **2** and at the same time the second base **42** is rotated in a counterclockwise direction in the drawing in a state where the first base **41** is left as it is, the base pin **431** of the first base **41** is caught by one side of the cutting groove **421***b* of the second body **421** during the rotation of the second body **421** so as to prevent further rotation of the second base **42**. Consequently, the first base **41** makes an angle of 90° with the second base **42**.

In addition, when the base pin **431** of the first base **41** is released from the inserted state into the vertical bar **2** and at the same time the first base **41** is rotated in a clockwise direction in a state where the second base **42** is left as it is, the first base **41** may be rotated until the base pin **431** of the first base **41** is caught by one side of the cutting groove **421***b* of the second body **421**. Consequently, the first base **41** makes an angle of 90° with the second base **42**. In this case, the fixing hole **2***a* may also be formed at a position corresponding to the base pin **431** of the rotated first base **41**.

That is, the rotational angle of the second base **42** relative to the first base **41** may be limited depending on a shape of the cutting groove **421***b* of the second body **421**. Also, the minimum or maximum angle at which the first and second bases **41** and **42** are rotated with each other may be arbitrarily set by changing the length of the cutting groove **421***b* and the position of the fixing hole **2***a*, on occasion demands.

Fifth Embodiment

FIG. **18** is an exploded perspective view of a screen base in accordance with a fifth embodiment of the present invention, and FIG. **19** is a coupled cross-sectional view of FIG. **18**.

The screen base, which is designated by reference numeral **50**, according to the fifth embodiment of the present invention is entirely similar to the screen base of the above-mentioned fourth embodiment. However, there is a difference in the configuration of a fixing unit in which foot switch members **533** are respectively provided at upper sides of first and second extension portions **512** and **522**, base pins **531** are installed to be slidable within respective first and second

reinforced portions **515** and **525**, each foot switch member **533** and the associated base pin **531** are connected by a wire cable **535**, and the like. Therefore, no description with respect to configurations which repeat or are similar to the above-mentioned fourth embodiment will be given in more detail.

The screen base **50** according to the fifth embodiment of the present invention includes a base which is rotatably coupled to the lower end portion of the vertical bar **2**, and a fixing unit to fix the base with respect to the vertical bar **2**.

In this case, the base includes a first base **51** and a second base **52** which are rotatably coupled relative to the vertical bar **2**.

Here, the first base **51** includes a first hollow cylindrical body **511** for inserting the vertical bar **2**, and a first extension portion **512** which extends outward of the vertical bar **2** from one side of the first body **511**. The first body **511** may be rotated along the outer peripheral surface of the vertical bar **2** in the circumferential direction thereof.

The second base **52** includes a second hollow cylindrical body **521** for inserting the vertical bar **2**, and a second extension portion **522** which extends outward of the vertical bar **2** from one side of the second body **521**. The second body **521** may be rotated along the outer peripheral surface of the vertical bar **2** in the circumferential direction thereof.

During the assembly of the first and second bases **51** and **52** to the vertical bar **2**, the second body **521** is located at a lower end of the first body **511** and the first and second extension portions **512** and **522** are located at the same height as each other. For this reason, the first extension portion **512** may extend outward of the vertical bar **2** from one side of the lower end of the first body **511**, and the second extension portion **522** may extend outward of the vertical bar **2** from one side of an upper end of the second body **521**.

Accordingly, a user may rotate the first base **51** so that the first base **51** makes a proper angle with respect to the vertical bar **2** in a state of inserting the first body **511** of the first base **51** and the second body **521** of the second base **52** into the outer peripheral surface of the vertical bar **2**. The first and second bases **51** and **52** are fixed with respect to the vertical bar **2** by inserting each base pin **531** of the fixing unit to be described later into an associated fixing hole **2***a* of the vertical bar **2**.

Here, the vertical bar **2** may have a circular or polygonal cross-section shape, and have a hollow pipe shape in order to attain a reduction in materials and weight. The one or more fixing holes **2***a* are formed to be spaced apart from one another by a predetermined distance along the outer peripheral surface of the vertical bar **2** in the circumferential direction thereof.

In this case, the fixing hole **2***a* may be formed as plural in number on the outer peripheral surface of the vertical bar **2**, corresponding to an angle at which the first and second bases **51** and **52** are rotated. For example, the fixing holes **2***a* may be formed at equal intervals of 30° along the circumferential direction of the vertical bar **2**.

The first and second bodies **511** and **521** have a hollow cylindrical shape, and the above-mentioned vertical bar **2** is rotatably coupled to the hollowness of each of the first and second bodies **511** and **521**. In this case, in order for the vertical bar **2** and the first and second bodies **511** and **521** to be smoothly rotated relative to one another, the hollowness of each of the first and second bodies **511** and **521** may be provided, at respective upper and lower ends thereof, with bushings **54** which are made of, for example, a plastic material such as polyacetal (POM), and the lower end of the vertical bar **2** may be coupled to a lower end cover **56** using fasteners **55** such as a bolt.

In this case, the first and second extension portions **512** and **522** have a predetermined width, and are formed in a plate shape having a longer length than the width. The first and second extension portions **512** and **522** respectively have ends formed in a rounded shape, and the rounded ends of the first and second extension portions **512** and **522** are respectively formed with a first round portion **513** and a second round portion **523** which have an arc shape.

The ends of the first and second extension portions **512** and **522**, namely, upper sides of the first and second round portions **513** and **523** are respectively formed with coupling grooves **58** for coupling the foot switch members **533** to be described later. In this case, each coupling groove **58** is formed, at a center thereof, with a hinge shaft **581** in a width direction thereof, and one side of the hinge shaft **581** is penetratively formed with a connection hole **582** which is communicated with an associated operation space portion **59** of each of first and second reinforce portions **515** and **525** to be described later.

The first and second round portions **513** and **523** are formed, at respective lower ends thereof, with a first cylindrical support portion **514** and a second cylindrical support portion **524** which are formed to extend downwards from the lower ends thereof. The first and second support portions **514** and **524** may be directly supported on the ground, or be provided, at respective lower ends thereof, with casters **57** as shown in FIGS. **18** and **19** so that the screen is movable.

Furthermore, the first and second extension portions **512** and **522** are formed, at lower ends thereof, with the first and second reinforced portions **515** and **525** in downward directions thereof, respectively. The first and second reinforced portions **515** and **525** are respectively formed along longitudinal directions of the first and second extension portions **512** and **522**. Each of the first and second reinforced portions **515** and **525** is connected, at one end thereof, to one side of each of the first and second bodies **511** and **521** while being connected, at the other end thereof, to one side of each of the first and second support portions **514** and **524**.

In this case, one end of the associated first or second reinforced portion **515** or **525** abutting on each of the first and second bodies **511** and **521** is formed with an associated first or second flange portion **516** or **526** which has an increasing thickness as going toward each first or second body **511** or **521**. Each of the first and second flange portions **516** and **526** is formed therein with an associated first or second base pin receiving portion **517** or **527** so as to receive the base pin **531** to be described later.

In this case, each of the first and second reinforced portions **515** and **525** is formed therein with the operation space portion **59** for receiving the base pin **531**, pin connector **532**, and wire cable **535** to be described later. The operation space portion **59** is communicated, at one side of an upper end thereof, with the above-mentioned connection hole **582**, and the wire cable **535** in the operation space portion **59** is connected to the associated foot switch member **533** through the connection hole **582**.

In addition, the first and second extension portions **512** and **522** are formed, at upper sides thereof adjacent to the first and second bodies **511** and **521**, with first and second connection portions **518** and **528** which are inclined upwards toward the first and second bodies **511** and **521**, respectively. Each of the first and second connection portions **518** and **528** has a curved surface at an upper side thereof, thereby providing an aesthetically external appearance.

Meanwhile, the outer peripheral surface of the vertical bar **2** is protrusively formed with the catch part **4** for serving to limit the insertion distance of the vertical bar **2**, and the lower

end edge of the catch part **4** is caught and supported by an upper end edge of the bushing **54**.

In accordance with the present embodiment, the first and second bases **51** and **52** may be respectively provided with the fixing units to fix the first and second bases **51** and **52** at any rotation position with respect to the vertical bar **2**. However, since the fixing units of the respective first and second bases **51** and **52** have the same configuration and operation, the fixing unit of the first base **51** as an example will be described with respect to the configuration and operation thereof below.

The fixing unit of the first base **51** includes the base pin **531** inserted into the fixing hole **2***a* of the vertical bar **2**, the pin connector **532** which is installed in the operation space portion **59** within the first reinforced portion **515** so as to be slidable in the longitudinal direction of the first reinforced portion **515** while the other end of the base pin **531** is coupled to one side of the pin connector **532**, the foot switch member **533** which is hinge-coupled to the upper side of the end of the first extension portion **512** so as to be rotatable in an upward and downward direction, and the wire cable **535** to connect the lower end of the foot switch member **533** and the other side of the pin connector **532**. The base pin **531** may be provided, at one side thereof, with an elastic member **534** to elastically support the base pin **531** toward the vertical bar **2**.

Here, the pin connector **532** has a hexahedral block shape in entirety thereof, and is installed in the operation space portion **59** within the first reinforced portion **515** so as to be slidable in a left and right direction. The pin connector is formed, at one side thereof, with a fitting groove **532***a* to fit an associated connection port **535***a* of the wire cable **535** to be described later.

In one side of the operation space portion **59**, the base pin **531** is inserted toward the first base pin receiving portion **517**, and is then inserted, at one end thereof, into the fixing hole **2***a* of the vertical bar **2**.

In this case, the other end of the base pin **531** is coupled to one side of the pin connector **532**, such that one end of the base pin **531** is inserted into the fixing hole **2***a* of the vertical bar **2** or is released from the inserted state into the fixing hole **2***a* of the vertical bar **2** during movement of the pin connector **532** in the left or right direction.

In this case, one side of the base pin **531** is formed with a catch portion **531***a*, and the elastic member **534** such as a coil spring is interposed between the catch portion **531***a* and an inner wall of the first base pin receiving portion **517**. Consequently, the base pin **531** is elastically supported toward the vertical bar **2** by the elastic member **534**.

The fastening and unfastening of the base pin **531** depending on the movement of the pin connector **532** in the left and right directions are attained by an operation of the foot switch member **533** connected to the pin connector **532** via the wire cable **535**.

In this case, the foot switch member **533** has a bent plate shape so that both ends of the foot switch member **533** are made at a predetermined angle therebetween. The foot switch member **533** has one end formed in a rounded shape as an arc form corresponding to the shape of the first or second round portion **513** or **515**. The lower end of the foot switch member **533** is formed, at a center thereof, with a hinge shaft receiving portion **533***a* to couple the hinge shaft **581** of the coupling groove **58** while being protrusively formed, at one side thereof, with a fitting portion **533***b* to form a fitting hole **533***c*.

Both ends of the wire cable **535** are provided with the connection ports **535***a* having a cylindrical shape, and the connection ports **535***a* are fitted to the fitting groove **532***a* of the pin connector **532** and the fitting hole **533***c* of the foot switch member **533**, respectively.

Accordingly, as shown in FIG. **19**, when the rounded one end of the foot switch member **533** is pressed or pushed with the foot or hand, the wire cable **535** fitted to the fitting portion **533***b* is pulled while the other end of the foot switch member **533** is rotated upwards about the hinge shaft receiving portion **533***a*. Subsequently, the base pin **531** is separated from the fixing hole **2***a* of the vertical bar **2** while the pin connector **532** is moved outward of the vertical bar **2**, thereby enabling rotation of the first base **51**.

In addition, when the first base **51** is rotated at a proper angle and then the other end of the foot switch member **533** is pressed or pushed with the foot or hand, the base pin **531** is moved toward the vertical bar **2** due to the elastic force of the elastic member **534** while the wire cable **535** is released and the tip of the base pin **531** is inserted into the fixing hole **2***a*. Consequently, the first base **51** may be fixed in position.

Meanwhile, the rotational angle of the second base **52** relative to the first base **51** may be limited by a cutting groove **521***b* which is cut and formed on the outer peripheral surface of the second body **521** in the circumferential direction thereof by a predetermined angle.

That is, as shown in FIG. **18**, the second body **521** is formed, at one side thereof, with a through hole **521***a* for inserting the base pin **531** of the second base **52** while being formed, at the other side thereof facing the one side, with the cutting groove **521***b* which is cut by a predetermined angle in the circumferential direction. The base pin **531** of the first base **51** is inserted through the cutting groove **521***b* and is caught by both ends of the cutting groove **521***b* during the rotation of the second base **52** relative to the first base **51**, thereby limiting the rotational angle of the second base **52**. These configuration and operation will be described below.

FIG. **20** is an operation state view illustrating an example in which a pair of bases is spread at an angle of 180° in accordance with the fifth embodiment of the present invention, and FIG. **21** is an operation state view illustrating an example in which a pair of bases is spread at an angle of 90° in accordance with the fifth embodiment of the present invention.

On the basis of the vertical bar **2** in FIG. **20**, the first base **51** is illustrated at the left side in the drawing, whereas the second base **52** is illustrated at the right side in the drawing. In a state where the base pin **531** of the first base **51** is inserted into the fixing hole **2***a* of the vertical bar **2** via the cutting groove **521***b* of the second body **521** and the base pin **531** of the second base **52** is inserted into the through hole **521***a* of the second body **521**, the first and second bases **51** and **52** are spread at an angle of the 180° with respect to the vertical bar **2**.

In this case, when the second base **52** is rotated in a counterclockwise direction in the drawing in a state where the first base **51** is left as it is, the second base **52** may be rotated until making an angle of 90° with the first base **51** during the rotation of the second body **521** as shown in FIG. **21**, such that the base pin **531** of the first base **51** is caught by one side of the cutting groove **521***b* of the second body **521** so as to prevent further rotation of the second base **52**.

In addition, when the base pin **531** of the first base **51** is released from the inserted state into the vertical bar **2** and then the first base **51** is rotated in a clockwise direction in a state where the second base **52** is left as it is, the first base **51** may be rotated until the base pin **531** of the first base **51** is caught by one side of the cutting groove **521***b* of the second body **521**. Consequently, the first base **51** makes an angle of 90° with the second base **52**.

That is, the rotational angle of the second base **52** relative to the first base **51** may be limited depending on a shape of the cutting groove **521***b* of the second body **521**. Also, the minimum or maximum angle at which the first and second bases

51 and 52 are rotated with each other may be arbitrarily set by changing the shape of the cutting groove 521*b* of the second body 521, on occasion demands.

As is apparent from the above description, in accordance with a screen base according to exemplary embodiment of the present invention, since at least one base is rotatably coupled to a vertical bar which extends to a lower end of a screen, it may be possible to clean up an external appearance of the screen during installation thereof by adjusting an installation angle of the base with respect to the vertical bar.

In addition, in accordance with the screen base, it may be possible to easily fix the base to a proper position using a fastening member such as a set screw or a base pin while adjusting the installation angle of the base with respect to the vertical bar, and to fix the one or more bases while adjusting an angle between the bases. Therefore, the screen base may satisfy a consumer's aesthetic sense while securing a support function of the screen during the installation thereof, thereby enabling an increase in product competitiveness.

While the present invention has been described with respect to the specific embodiments, it will be apparent to those skilled in the art that various changes and modifications may be made without departing from the spirit and scope of the invention as defined in the following claims.

What is claimed is:

1. A screen base which is coupled to a vertical bar extending to a lower end of a screen and supports the screen, the screen base comprising:

a base comprising a body which has a hollow shape and is rotatably coupled to the vertical bar, and an extension portion which is formed to extend outward of the vertical bar from the body; and

a fixing unit to fix the body with respect to the vertical bar,

wherein the base comprises:

a first base comprising a first body which has a hollow shape and is rotatably coupled to the vertical bar, and a first extension portion which is formed to extend outward of the vertical bar from the first body; and

a second base comprising a second body which has a hollow shape and is coupled to a lower end of the first body, and a second extension portion which extends outward of the vertical bar from the second body and is formed at a height corresponding to the first extension portion.

2. The screen base according to claim **1**, wherein the hollowness of the first or second body is provided with a bushing, the fixing unit is a set screw which passes through and is inserted into one side of an outer peripheral surface of the first or second body, and a rotational friction force of the first or second body is adjusted with respect to the vertical bar by the set screw.

3. The screen base according to claim **1**, wherein:

the first body is protrusively formed, at one side thereof, with a first fastening portion to fasten the fixing unit;

the second body is protrusively formed, at one side thereof, with a second fastening portion; and

the first and second fastening portions allow a rotational angle of the second base relative to the first base to be limited.

4. The screen base according to claim **1**, wherein the fixing unit comprises:

a base pin of which one end is inserted into a fixing hole of the vertical bar; and

a switch member which is slidable in a longitudinal direction of the first or second base, the other end of the base pin being coupled to one side of the switch member.

5. The screen base according to claim **1**, wherein the fixing unit comprises:

a base pin of which one end is inserted into a fixing hole of the vertical bar;

a pin connector which is slidable in a longitudinal direction of the first or second base, the other end of the base pin being coupled to one side of the pin connector;

a foot switch member which is hinge-coupled to an upper side of the first or second base so as to be rotatable in an upward and downward direction; and

a wire cable to connect a lower end of the foot switch member and the other side of the pin connector.

6. The screen base according to claim **4**, wherein the fixing unit further comprises an elastic member to elastically support the base pin toward the vertical bar.

7. The screen base according to claim **1**, wherein the second body is formed, at one side thereof, with a through hole while being formed, at the other end thereof, with a cutting groove which is cut by a predetermined angle in a circumferential direction thereof, and a rotational angle of the first base relative to the second base is limited by a base pin of the first base which is inserted into the cutting groove.

8. The screen base according to claim **5**, wherein the fixing unit further comprises anelastic member to elastically support the base pin toward the vertical bar.

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